

THE TIMES

Dreams of a peaceful revolution: interview with M Giscard, page 12

Two suspended by Lloyds after £33m losses on currency deals

Unauthorized dealings in foreign currencies on the forward market have cost Lloyds Bank an estimated £33m, it was revealed yesterday. The loss resulted from transactions carried out by Mr Marc Colombo, the dealer at Lloyds Bank International's Lugano branch in Switzerland. Both he and the branch manager have been suspended. Lloyds Bank has unwound Mr Colombo's transactions and expects no further losses.

Irregularities at Lugano branch

By Ian Morrison
Financial Correspondent
The Lloyds Bank group has incurred an estimated pre-tax loss of £33m as a result of unauthorized foreign exchange transactions by a dealer at its branch in Lugano, Switzerland. The position has now been regularized, the bank said yesterday. "All commitments of the branch are of course being met by Lloyds Bank International which is the international arm of the group." Mr Marc Colombo, the dealer involved, and Mr Egidio Mombelli, the branch manager, have both been suspended. Mr Colombo has cooperated with the bank in its attempts to reconstruct the means which gave rise to the losses. According to Lloyds he has confessed to buying and selling currencies on the "forward" market without authorization and to tampering with the branch records, including falsifying mandatory returns submitted to the Swiss Banking Commission. The reason for the losses is that Mr Colombo's transactions were "uncovered". In other words, he contracted to buy and sell currencies at fixed prices at various future dates without any certainty that he would then be able to "unwind" the transactions at favourable rates. "Covered" transactions, by contrast, involve dealings on both the spot and forward markets to ensure that whatever happens to exchange rates during the period of the forward contract, the bank will suffer no loss. The Bank of England imposes extremely strict limits on British banks' uncovered positions between sterling and other currencies and Lloyds claims that it only rarely runs an uncovered position between any two currencies. However, uncovered transactions are a constant source of temptation to a dealer who believes strongly that one given currency is likely to rise or fall sharply in terms of another. If he believes that a currency is going to rise, for instance, he can buy it for delivery in three months' time, say, at today's forward rate in the hope

that he can sell it at a profit on the spot market. The precise scale of Mr Colombo's forward transaction has not been disclosed, nor the currencies in which he dealt. However, foreign exchange dealers estimated yesterday that the "open" positions could have amounted in sterling terms to over £500m. Lloyds has now "closed" all the positions, by matching every forward purchase with a forward sale, and vice versa. Foreign exchange dealers argue that if the consequential loss is £33m, the gross amounts involved must have been huge. Uncovered forward transactions have already caused heavy foreign exchange losses for several other European and American banks recently. The Union Bank of Switzerland is reckoned to have lost some \$150m (some £65m); Westdeutsche Landesbank over \$100m and Franklin National Bank nearly \$50m. The precise effect of Lloyds' loss on its published earnings this year remains to be seen. It should be entitled to full United Kingdom tax relief, which would reduce the net figure to under £16m, and may also be able to claim partial compensation under a fidelity bond underwritten with Lloyds of London. Lloyds' statement yesterday said the figures should be seen in the context of its pre-tax profits of £77.8m in the first half of 1974 and capital reserves of £522m at the end of 1973. On the stock market, Lloyds Bank shares slumped 18p to 127p. Lloyds apparently received a strong hint that something was wrong at Lugano about two and a half weeks ago. Mr Colombo came to England and helped the bank to reconstruct the records. Lloyds subsequently received Bank of England permission to unscramble the transactions and has since worked in close touch with the Swiss National Bank and Banking Commission. Lloyds Bank International, which is wholly owned by Lloyds Bank, set up its Lugano branch about five years ago. It is the smallest of the bank's three Swiss branches. Financial Editor and Business Diary

Bonn leader in Paris for summit talks

From Richard Wigg
Paris, Sept 2
Herr Helmut Schmidt, the West German Chancellor, arrived here this evening and after driving to the Elysée Palace immediately began talks with President Giscard d'Estaing. In this third meeting between the French and West German leaders in just over three months the main subjects will be the French President's wish to inject new life into the EEC, and the joint steps which can be taken by the Europeans to overcome their present economic and financial difficulties. The talks will go on through dinner. Herr Schmidt is expected to leave for Bonn in the morning. Herr Schmidt telephoned the French President after his television broadcast last week and suggested the meeting to find out precisely what the measures were that M Giscard d'Estaing intended to propose on European monetary and economic union again. He is also thought to want to know what the content might be of the discussions envisaged by the French President among the leaders of the Nine on moving towards the realization of European political union. The French President's strategy is clear. He wants to seize the European affairs in the same kind of bold initiative as he developed successfully in home affairs in his first three months. No statements are expected after the meeting and if anything of substance about the talks emerges it will be because the other EEC Governments have to be informed first. French comment today was heavily underlining the shadow of Britain over any kind of European initiative, both because of its present economic situation and because of the expected general election. France refused at the two leaders' first meeting in May an offer of massive financial assistance of the kind Herr Schmidt has just accorded Italy. But Paris remains attached to the idea of an EEC through a loan, possibly backed by the Arab nations, to overcome the oil balance of payments deficit problem. The French President will be anxious to hear from Herr Schmidt about plans to re-stimulate the German economy, which form an essential part of France's export drive plans. The French Government hopes the German Chancellor will be convinced that its anti-inflationary package has begun to bite. It is likely that the two leaders will study the European agricultural problem. They may search for common ground for significant reforms so as to avoid the continuing resort to national stop-gap measures.

'Le Monde' calls for Tory victory

Paris, Sept 2.—British electors must vote Conservative at the general election, predicted for next month, if Europe is to move towards closer unity, the independent daily newspaper *Le Monde* said today. Commenting on President Giscard d'Estaing's call for a stronger Europe, *Le Monde* said: "No far-reaching action can be taken in the Community before the next British election. If Labour wins, the Community will continue to exist under a threat from the United Kingdom as long as London has not specified its terms of renegotiation and as long as the British people have not declared their belief in the Community." Until these matters were cleared up, the Community would live in doubt. *Le Monde* said: "As for the management and development of the Community, Mr Wilson, who does not seem to have a well-established European strategy in his head, will squeeze a few advantages for his country, notably in agricultural affairs, and as long as his past will carry on using this irritating tactic of unavowed obstruction which he has made his own." In short, those who still believe in Europe, whatever their own political leanings, have no other choice than to wish the Conservative Party success.—Reuter.



Lord Allen of Fallowfield, president of the TUC, telling delegates on the first day of the congress at Brighton yesterday that no government could take decisions any more without consulting the trade unions first (President's address, page 4).

More union support for social contract is isolating AUEW

From Paul Routledge
Labour Editor
Brighton
The campaign by trade union leaders to sustain the sagging credibility of the social contract between the TUC and the Government showed concrete results yesterday, but also suffered a setback. Unions representing more than 750,000 local government workers and miners declined to follow the militant Amalgamated Union of Engineering Workers (AUEW) into the anti-contract camp; and the Society of Civil Servants, a newcomer to the TUC membership which is not affiliated to the Labour Party, decided to reject the general council's new code for

collective bargaining, although the decision is unlikely to carry great political weight. Mr Gerry Gillman, general secretary of the society, said: "We are fearful of the impact of the social contract on Civil Service pay. We are worried that it could leave us lagging behind. We shall abstain." After a day of uncertainty and heart-searching among union delegations, it seemed clear that the engineers will be isolated with some "white-collar" unions from the mainstream in the debate on the social contract tomorrow. The delegation of the National and Local Government Officers' Association (NALGO), which might have gone against wage

restraint, and has a conference decision rejecting the social contract, voted 35 to 15 not to go along with the engineers. NALGO, which has been noticeably less moderate in recent months, and has no political ties with the Labour Party, is to support the general council's report *Collective Bargaining and the Social Contract*. So will the National Union of Mineworkers: its delegation voted 25 to 18 to go along with the council. The NUM also has a conference decision opposing an income policy, but Mr Lawrence Daly, its general secretary, will call for support for the social contract when he leads the debate tomorrow. Continued on page 4, col 2

Mass grave victims exhumed by Turks

From Our Correspondent
Nicosia, Sept 2
Turkish soldiers with handkerchiefs round their faces dug up decomposing bodies from a mass grave discovered in a rubbish dump in the Turkish Cypriot village of Maratha, near Famagusta, today. The Turkish Cypriot administration said the bodies, men, women and children, belonged to students of the village area massacred by the Greeks, but the Cyprus Government claimed that evidence in their hands indicated at least one body was that of a Greek woman. The Turks said there might be as many as 90 bodies in the area. United Nations police on the scene said they had counted at least 21 skulls. The exhumed bodies were in such an advanced state of decomposition that many fell apart as Turkish soldiers lifted them with shovels. Mr Nihat Hassan, the Imam of Maratha, said the inhabitants of the village were massacred by gunmen from nearby Greek villages two days before the Turkish Army advanced to capture the area on August 16. "There were 93 souls in the village," he said. "Six of us are alive. The Greeks took 11 men as prisoners and we don't know what happened to them. The rest may be in the grave." Two peasant women cried as they watched the soldiers dig out body after body from the mass of garbage. Mr Ahmet Sulleyman, aged 19, a Turkish Cypriot soldier, said he arrived at the village on Sunday to discover that his whole family, his mother and five sisters, were missing. "They all be in there," he said with a sob. The grave was discovered by Mr Kemal Mustafa, a 60-year-old Maratha shepherd, who said he hid in a cave for two days and nights after Greek Cypriot

gunmen went to the village on August 14. He said the Greeks came from the nearby villages of Pigi, Milea and Peristerona. "I know them," he said. "I recognized their voices, one is the baker and the other the constable. They rounded up all the women and children and took them away. I heard shouting." The Imam related a similar story. He said he hid in his cellar with his wife, son and daughter. "We covered ourselves with sacks and we stayed there for five days. I heard the Greeks say: 'Don't be afraid, we will take you to the Greek school and bring you home again.' Some of our children were laughing, they thought they were going for a walk. This is the second discovery of a mass grave in the same area. Two weeks ago the Turkish authorities took journalists to the nearby hamlet of Alos where they said there was a mass grave containing the bodies of 57 Turkish villagers. Journalists saw five bodies dug up. Commenting on the Maratha mass grave discovery, a spokesman for the Government of President Clerides noted that hundreds of Greek Cypriots were reported missing in the same area and their fate was unknown. The spokesman said that an article from the body of a woman from the Maratha grave showed she was a Greek, not a Turk. He did not identify the object, which he said was in Government hands, and did not reveal how it had been brought to the Greek side. The Maratha mass grave is the biggest substantiated atrocity brought to light in the aftermath of the Turkish invasion, during which both sides are constantly charging each other with countless killings, mass executions, rapes and lootings. Continued on page 5, col 5

Anger over Labour poster at Rome athletics

From Neil Allen
Rome, Sept 2
A poster proclaiming "Britain will win with Labour" was removed from the perimeter of the Olympic Stadium in Rome today on the first day of the European Athletics Championships, by order of Mr Adrieus Mulder, Dutch chairman of the European Athletics Association. The poster, in clear black letters against a white background, was at the end of the back straight, just before the last turn of the track, where it could be clearly picked up by the BBC and ITV cameras as they made their daily coverage of the races. Before Mr Paulen, obviously furious at the intervention of politics into the sports arena, had ordered the advertisement to be removed it was in view during a heat of the 400 metres hurdles for men featuring Alan Pascoe, the former British athletics champion. Although the rules of the International Amateur Athletics Federation allow commercial advertising inside stadiums, the federation has as one of its prime objects "to strive to

ensure that no racial, religious, political or other kind of discrimination be allowed in athletics." Mr Paulen said: "This has no room in an athletics stadium and must be taken away at once." "Told it was all right": The poster was paid for by the Labour Party, which rented the stadium for its annual meeting. The firm called Special Publicity Projects (a Staff Reporter writes). Mr Percy Clark, the party's director of publicity, said last night: "We were told by the contractors that it was all right after they had checked with the Italians." He would not disclose the cost of using one of the eight poster sites round the track. The idea was put forward by Special Projects. The firm, which has worked for Labour before, was a subsidiary of Associated Newspapers, Mr Clark added. British medals: Tony Simmons, of Britain, won a silver medal in the 10,000 metres, narrowly failing to catch Kuschmann, of East Germany. Joyce Smith, also from Britain, won a bronze medal in the women's 3,000 metres. Games report, page 8

Mr Crosland backs Camden's compulsory purchase of Centre Point flats

By John Young
Planning Reporter
Mr Crosland, Secretary of State for the Environment, yesterday confirmed Camden council's compulsory purchase order on 36 two-bedroom maisonettes which form part of the Centre Point complex in London. The order was the subject of a public inquiry in January and February, at which the owners, Sovereign Investments Ltd, a subsidiary of Mr Harry Hyams's Oldham Estates, objected that the flats were unsuited to the council's needs and that the order was "influenced by prejudicial and partisan motives". It was said that the flats were too expensive for the council and that to separate their ownership from that of the adjoining office block would cause severe practical difficulties. After being empty for nearly ten years since they were completed, the flats were leased to Brompton Securities last December. During this summer a number of them have been let to tourists on a short-term basis at rents reported to be more than £15 a day. In his report to Mr Crosland, Mr Peter Boydell, QC, the inquiry inspector, said that the two most important features of the case were that at the time of the inquiry, the flats had been empty ever since they were built and that tens of thousands of Londoners had no home of their own. He concluded that there was no compelling reason in law to withhold confirmation of the order and that the flats would make a direct contribution to the housing needs of the council, which had 2,470 families on its waiting-list for two-bedroom accommodation. Mr Boydell suggested that the likely cost would not be unacceptably high, but the council yesterday was unable to estimate what it might be asked to pay. At the inquiry a council official said that the flats could be let for between £10.63 and £11.61 a week, although earlier Camden's own counsel had put the economic rent at between £60 and £80.

Army defuses Bristol bomb

Army experts yesterday defused a parcel bomb sent to a Bristol electronics company. The device, which had a trigger mechanism made from a battery and an old watch, was big enough to kill a man, the Army said. It was wrapped in an Irish newspaper and was inside an electric iron box. The electric robot developed in Ulster was used to examine the parcel before the device was defused. £200m oil pipeline A single pipeline from five North Sea oilfields to Shetland will supply more than half Britain's oil needs by 1980. Seventeen oil companies are co-operating in a £200m pipeline project. Business News, page 15

Dock ban on export sugar load

From Our Correspondent
Hull
Dockers at Hull are refusing to load a consignment of sugar for export in protest against the shortage on the home market. The sugar, 80 tons in hundreds of weight bags, is in a quayside shed on the port's King George Dock, waiting to be loaded into the *Manipur*, a cargo vessel registered in Liverpool, for the Red Sea port of Jiddah, Saudi Arabia. The Hull and Humber Cargo Handling Company said the dockers had not yet been asked to load the sugar, but Mr Tony Fee, a dockers' shop steward

said the men would refuse to do so when asked. Mr Fee said he had sent a telegram to Mrs Shirley Williams, Secretary of State for Prices and Consumer Protection, telling her that the sugar had been "impounded" by the dockers and asking her to divert it immediately to the home market to stop the exploitation of housewives. He understood that the owner of the sugar, a London company, was exporting 1,500 tons a week, and that four lorry loads of sugar bound for Hull had been diverted to Immingham because of the dockers' decision.

In a letter to the Prime Minister Mr Michael McNair-Wilson, MP for Newbury, said that the sugar shortage seems to be getting worse, "which is a very different situation to the one outlined in a letter to me from the Parliamentary Secretary at the Ministry of Agriculture on August 16 in which he suggested that supplies to the retail trade would be significantly better by the end of August. Clearly he was mistaken." "I think the nation deserves an immediate statement about the adequacy of sugar supplies this autumn and winter." Text of speech, page 13
Leading article, page 14

The rest of the news

- Red Lion Square: Left-wing attack on police prearranged. Yard man says 2
- Ulster security: Catholics cool towards Government plan 2
- British Association: International control of research safety needed. Sir John 3
- Kendrew says 3
- Football: Jail sentences and match ban on rowdies 3
- Livestock: difficulties: Leaders of farmers' unions meet Mr Peart 4
- France: Government seeks public's help to fight price rises 5
- Brussels: 20,000 tractors take to streets in farmers' protest 5
- Ethiopia: Crowds quietly watch marchers calling for Emperor's removal 5
- Mozambique: Frelimo and Portugal to begin independence talks this week 6
- Sikkim: Chief Minister denounces kingdom's ruler 6
- Fashion: What's a nice dress like you doing in a place like this? 6
- Defence: Balancing security with savings. Lord Chalfont 12
- Court Line: Mr Benn gives priority to takeover of ship-building group 15
- Motors: Chrysler's pay agreement ends production standstill 15
- Aerospace electronics: Six-page special report 15
- Appointments 14
- European 5
- Overseas 5, 6
- Obituary 14
- Premiums 845 14
- Science 14
- Court 14
- Crossword 14
- Engagements 14
- TV & Radio 23
- Features 6, 12
- Theatres, etc 7
- Letters 13
- 25 Years Ago 14
- Weather 2
- Home 2, 3
- Wills 14

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HOME NEWS

Left-wing attack was prearranged, Yard man tells Red Lion inquiry

By Michael Horsnell

An attack on the police by left-wing demonstrators at Red Lion Square, London, in June, when Kevin Gately, aged 20, a student, died and 39 police officers were injured, was both determined and prearranged.

That was stated yesterday by Mr John Gerrard, Deputy Assistant Commissioner of the Metropolitan Police, who was in charge of police operations in the square, at the opening of the independent public inquiry into the riot before a judge, Sir Scarman, at Church House, Westminster.

Mr Gerrard was the first of about 40 witnesses who will give evidence of what happened when riot police and mounted officers tried to prevent a riot between left-wing supporters of the Liberation movement and the National Front.

Fifty-one people were arrested and six demonstrators were injured in clashes. Mr Gerrard disclosed that the lettings secretary at Conway Hall in Red Lion Square had let the small hall to the Liberation group without knowing its opposition to the National Front, which had earlier booked the large hall there for a meeting.

Mr Lewis Hawser, QC, for the inquiry, said earlier that it was not the function of the inquiry to investigate individual incidents or allegations against specific individuals. He said the tribunal would not be investigating the death of Kevin Gately and added: "The only comment I would make is that his death is a serious and perhaps awful warning of what may happen if violence occurs in this kind of way."

The inquiry was solely to "review the events and actions which led to disorder in Red Lion Square and to consider whether any lessons may be learnt for the better maintenance of order when demonstrations take place."

The National Front organized a protest march against the Government's amnesty to some immigrants that ended in a meeting at Conway Hall. The same day a march against the alleged racist views of the National Front was organized by the London area council of Liberation, also ending in Red Lion Square.

Mr Hawser said that 923 police officers were involved in keeping the demonstrations peaceful and that supporters of each of the two protesting groups numbered a thousand.

The National Front applied on April 30 to the owners of Conway Hall for permission to meet there, and Mr Martin Webster, who led the march, later agreed a route with the police.

Liberation, which organized the counter-demonstration with the support of other left-wing groups when they heard of the National Front's plans, wanted to take the same route, but the police would not agree. Police did allow, however, both organizations to plan open-air, open-air meetings in different corners of Red Lion Square when it was realized that both the rooms booked at Conway Hall would not be large enough.

Arrangements were also made to prevent access from one room to the other in Conway Hall and for different entrances to be used. A cordon of 45 foot-police officers in two rows was drawn up in Red Lion Square to keep the two groups apart and was supported by 12 mounted policemen. One section of the Liberation group, however, turned away from the prescribed route. Mr Hawser said, "there ensued a violent clash with the police cordon." That section linked arms and made a concerted rush at the police cordon with the aim of breaking through into the area in front of Conway Hall.

"The marchers became locked in a violent struggle with the police cordon, part of which was forced back some yards and, in fact, appears to have been broken in places," he continued. Mounted police moved in and officers of the Special Patrol Group arrived.

Mr Hawser emphasized, however, that there was a considerable difference in the evidence given by the two sides. He added: "There is no doubt that the foot police and mounted police had their truncheons out both in the initial fighting in Red Lion Square and in Old North Street, but the nature and the extent of use of the truncheons is a matter of controversy."

He then turned to the trouble that developed at Theobalds Road and Southampton Row near by. After delivering a petition to Downing Street the National Front group arrived at Verdon Place at the junction with Southampton Row.

There they met about 150 Liberation marchers; and missiles, including smoke bombs, were thrown, though without hitting anyone, as police reinforcements arrived.

Complaints made against the police were that the charging of Theobalds Road was unnecessary and that they were



Lord Justice Scarman leaving Church House, Westminster, yesterday.

involved in an unprovoked attack without warning or justification.

Mr Hawser said the primary aim of the police in crowd control was not to corner and arrest, as has also been alleged, but to allow people to get away.

Mr Hawser said that Mr Sydney Bidwell, MP, one of the speakers in the square, would describe how people were driven towards the meeting and mounted police rode down on them.

A provisional list of questions that the inquiry might consider which Mr Hawser had drawn up included one about whether there should be legislation for a civil reserve force to assist the police, a suggestion made recently by some MPs.

Mr Gerrard told the inquiry that the demonstrations planned for Red Lion Square were in his view well within the capability of the police to control, and if the marches had been banned it would have meant both sides making their

way to the square and the resulting disorder would have been carried over a wide area without police control.

Without mounted police, he added, it would have been necessary for the Metropolitan Police to have riot equipment. Of the assault on the police by left-wing demonstrators, Mr Gerrard said: "I can only say it was determined and pre-arranged because there was no time for demonstrators to make an on-the-spot decision to do this."

He ordered the mounted police to go in after a series of surges by demonstrators and sent in the Special Patrol Group to help to clear Old North Street and Red Lion Square. He gave instructions to clear the area and make arrests because it was quite clearly a riot.

He said a man he saw lying face down on the ground was Kevin Gately and added that his death was the "tragic event which lifted this demonstration out of the ordinary."

'Vassals' of Scotland win freedom from feu

From Ronald Faux, Edinburgh

A big publicity campaign will be launched by the Government next month to persuade property owners in Scotland to redeem their land and properties from feu duties.

Under the Land Tenure Reform (Scotland) Act, which came into operation on Sunday, about 700,000 feudal "vassals" who pay about £3.5m a year to their feudal "superiors" may opt to redeem themselves by paying 2 per cent Consoles, government stock. At present, that would amount to six and half times the existing annual feu, which range on Scottish property from 25p for some tenement flats to £42 a year for a new house. The new system is designed to end the 1,000-year-old system of paying feu duties.

The dates selected before which applications should be made include the Midsummer, Martinmas Term day (November 11), or Whitsunday (May 15). Mr Ronald King Murray, QC, Lord Advocate, said in Edinburgh yesterday that by mid-October libraries and local authority offices throughout Scotland would be stocked with the necessary forms to be presented by property owners to whoever receives their feus.

This is not only a very significant milestone in the reform of land tenure, it puts an end to an acute problem of the scandal of escalating feu duties on new houses. It is really goodbye to the feudal system."

Another provision is that when a property is sold, the feu must be cleared by the selling authority with compulsory purchase powers must also redeem the feu when acquiring the property. "This provision means that from now on most people will buy property free altogether of any feu duty or similar type of payment," he said.

The Act also prohibited the creation of residential leases of more than 20 years. Mr King Murray said that would ensure that the prohibition on feu duties could not be by-passed by creating a residential lease of, say, 99 years, and charging rent instead of feu duty.

It will also put a stop to the future of the confusion, hardship and sense of injustice so often created when a tenant who had a long lease finds that his house was going to revert to the landlord," he said.

Travel agency refunding holiday deposits in spite of warning

By Our Industrial Editor

Undeterred by last week's warning that travel agents who return money to Court Line holidaymakers may face legal proceedings, the Co-operative Wholesale Society said yesterday that it would continue with its refund of about £100,000 of deposits and other payments.

Indeed, the CWS is going further by collecting customers' documentation on their cancelled holidays and obtaining waivers to become a Court Line creditor.

The liquidators of the failed Court Line tour companies, including under the Clarkes, Horizon and Four-S names indicated on Friday that test cases might be brought against travel agents who hand over money to their customers rather than to Court Line, which has other creditors with claims on any funds legally due.

Operating one of the largest travel agencies in the country, the CWS has been giving holidaymakers the choice of their money back or alternative holidays.

A spokesman said yesterday that it was a policy decision taken immediately after the collapse of Court Line and the CWS intends to stand by its pledge, whatever complications might arise.

It is understood that the CWS is ready to pay over to the liquidators any sums ruled as due by a court, so the £100,000 operation may prove a more costly exercise if the liquidators press claims.

Few other travel agency insurers under the customers' money to which the liquidators now intend to lay claim since the breakdown of official negotiations between the Association of British Travel Agents (ABTA) and the Court Line special manager have the financial backing enjoyed by

the Co-operative Travel Service to risk any protracted dispute. At the same time, the CWS subsidiary is providing a novel counter to the liquidators' warnings by turning itself into a prime creditor.

The ABTA national council is due to meet tomorrow to review the position. The only glimmer of hope for holidaymakers seeking a return of all or some of their money is perhaps a fresh negotiation with Mr Rupert Nicholson, Court Line's special manager, who is one of the liquidators' main creditors to see whether the travel trade might accept a more modest deal.

That would involve accepting a smaller figure than the amount ABTA hoped to hand back, a sum equal to 20 per cent of all moneys due to all creditors. Again, non-travel agent creditors would expect waivers against any other sums funds that the liquidators are trying to gather in.

Mr Heath's old yacht smashed on rocks

In the gales and high seas that have swept the coast for two days Mr Heath's former yacht, the "Cloude", was wrecked on the east coast of Jersey yesterday.

The yacht was sold three years ago to Mr Stuart Benest, owner of a supermarket, and was renamed the Nuage du Main to avoid confusion with the Nuage du Main dragged her anchor and smashed on rocks under Mont Orgueil castle, near the village of Gorey.

Coastguards, lifeboats, a helicopter and rescue teams yesterday saved scores of small boats and crews.

A coastguard report said it was the year's busiest day for Essex and north Kent lifeboats. Almost all lifeboats were out, some more than once.

The rescue helicopter stationed at Manston, Kent, aided lifeboatmen off the coast saving yachtsmen from capsized craft and searching for missing dinghies.

A tug went to the assistance of a yacht which dragged her anchor in Carrick Roads, Falmouth. Four yachts were torn from their moorings at Falmouth and others were reported to have been swept out to sea at Padstow.

At Mudeford, Dorset, in torrential rain, small boats were torn from their moorings in the harbour.

The crew of six of the trawler Artemis, which went aground on the rocky Banffshire coast, near Cullen, yesterday got ashore on their liferaft. One man was slightly injured.

Conciliation service is soon in business

By Alan Hamilton

The Government's new Conciliation and Arbitration Service (CAS) opened for business yesterday to find its first customer already on the doorstep.

Predictably, the first arrival at the service's new office in the building in Westminster recently vacated by the Pay Board was a representative of Mr Clive Jenkins, bearing a dossier on his union's claim for sole bargaining rights at a leading Scottish insurance company.

The service, created as part of the Labour Government's repeal of the Industrial Relations Act, has taken the role of the Department of Employment's long established conciliation department, together with some of the functions of the Commission on Industrial Relations; its chairman is Mr Jim Mortimer, former head of industrial relations at London Transport, assisted by a council of three union leaders, three employers, and three independent academics.

Mr Jenkins's union, the Association of Scientific, Technical and Managerial Staffs (ASTMS), has been engaged in a five-year campaign to win negotiating rights for white-collar staff at the Edinburgh-based Scottish Widows' Fund. A recent ballot of staff there came out narrowly in favour of the association as the representative body, but according to Mr Jenkins yesterday, the government publications.

the company had still no agreed to recognize his union. About 1,500 staff are involved more than half of whom are employed at the company's headquarters in Edinburgh.

Mr Jenkins has been widely criticized in the past by the TUC colleagues for what they saw as his "back-door" use of the National Industrial Relations Court, contrary to the policy of the TUC.

Mr Jenkins's application will not be considered until next week, when the services governing conciliation in its first meeting to decide on policy.

The service actually became involved in a dispute within a few hours of its opening yesterday; officials met employers and union leaders in a further attempt to solve the two-month-old stoppage by printers at the Stationery Office, which has stopped the printing of Hansard, Acts of Parliament, and many other government publications.

Call for 100,000 helpers to ease teacher shortage

A call for 100,000 ancillary helpers to ease the burden of 510,000 teachers in England and Wales was made in London yesterday by Mr Fred Smithies, chairman of the education committee of the National Association of Schoolmasters.

Mr Smithies was addressing a press conference on the publication of an association discussion paper, *The Staffing of Schools*. The paper says it would be unrealistic to expect an increase in the supply of teachers and that it would be wiser to review alternative methods of relieving teachers of their burdensome periods of their burdensome periods of rain, bright intervals. Wind variable moderate, becoming SW strong or gale; max temp 15°C (59°F).

Edinburgh, E Scotland, Aberdeen, Glasgow, central Highlands, Argyll, N Ireland, Rain, heavy at times, bright periods; Wind E strong to gale; max temp 15°C (59°F).

By the greater provision of non-teaching assistants. Mr Smithies, aged 45, head of the English Department at Northampton Secondary School, said: "We agree that it will be costly, but it will be less costly than dramatically increasing the number of teachers."

Replying to questions, he said there would be misgivings about parents doing some of the jobs. "It might be difficult for someone's mum to be objective, but in a non-teaching role, none of these problems would apply."

Asked where the staff would come from, he said he envisaged a pool of women who would be paid perhaps a half to two thirds of the teachers' scale-one salary.

Ulster Catholics cool towards security forces expansion

From Robert Fisk

There seemed little chance last night that Roman Catholics in Northern Ireland would throw their weight behind the latest attempt by the British Government to expand the local paramilitary security forces. In an attempt to bring normal policing back into all areas of the province.

The scheme, which involves doubling the number of police reservists from 2,000 to 4,000 and increasing the strength of the Royal Ulster Constabulary and the Ulster Defence Regiment, as well as basing the reservists around their homes, has been totally rejected by the main Catholic party, the Social Democratic and Labour Party.

Even Mr Rees, the Secretary of State, acknowledged yesterday that it was unlikely that more than a handful of Catholics would offer themselves as recruits.

The Government's highly ambitious plan for a local reserve force, virtually every area of which was enclosed in *The Times* yesterday, and on Saturday, were introduced at a press conference at Stormont Castle presided over by Mr Rees and Mr James Flanagan, the Chief Constable of the RUC. They said on several occasions that there was no question of the new reservists acting as a third-force home guard on the lines of the proposals put forward by "loyalist" politicians in recent weeks, but that the most prominent Protestant political leaders all welcomed the scheme yesterday.

Government had at last realized that "only Ulster men and Ulster women could win the war against the IRA". The official Unionist Party "draft plan" is a useful first instalment, and observed that they were similar to the ideas suggested at the loyalists' conference at Portrush earlier this year.

Mr William Craig, of Vanguard, also gave them a cautious blessing but what worried the Protestant leadership was Rees's confirmation that another thousand troops were to be withdrawn from the province within the next two months.

Several senior civil servants at Stormont had, in fact, wanted the announcement of the troop withdrawals to be delayed for another week, and the same officials were yesterday making detailed inquiries, which were, of course, meant to be private, as to how *The Times* acquired the facts about both the police expansion and the military movement three days in advance of Mr Rees's announcement.

Inquiries were also made by Stormont Castle to the Army and the police, and a telephone call was believed to have been placed to the British Embassy in Dublin in an attempt to discover the source of the report. It emerged yesterday that even the two military units to be withdrawn from Ulster, 20 Medium Regiment, RA, and 13 Royal Marine Commando, had not been told of the plan in advance.

Mr Rees repeatedly insisted at his press conference yesterday that the reduction in military strength, which will bring the Army's establishment in Northern Ireland down to 14,000, did not in any way represent a British "pull-out" and was quite coincidental with the announcement of the police reserve.

Protestant politicians were not so certain of that, however, and Mr John Taylor, however, the most vociferous loyalist assemblyman in south Ulster, said the Government's decision to withdraw a thousand troops and place increased responsibility on the police reserve meant that Ulstermen could not be blamed for feeling that they had a moral right to create their own home guard.

The Ulster Defence Association condemned the plan because it said the "community" policing scheme would lead to separate Catholic and Protestant reserve forces.

Gov. Brian Faulkner, the former Northern Ireland Executive chief minister, praised the idea but said that there should be more than 4,000 reservists.

Mr Oliver Napier, the Alliance party leader, said that the announcement by Mr Rees did not begin to get to the heart of the issue, which was the operation of effective policing in all areas of the province.

Mr Basil Stanage, chairman of the police federation in Ulster, welcomed the idea of local participation in the police but felt that an acceptance by both communities of the RUC itself was needed.

Neither can there be the creation of any independent or semi-independent organizations which presume to carry out the functions of the lawfully constituted forces of law and order.

Mr Gerard Fitt, the party leader, said he was sadly disappointed by the proposals. "I do not believe that you can separate the security problem without instituting new political structures," he said. "I do not think that this document [an official publication giving details of the plan] will lead towards the creation of new political institutions. Mr Rees has allowed himself to be pushed into the loyalist mentality of believing that security was the only answer to the province's difficulties."

Mr Rees explained that the new reservists, who would have no rank structure but would carry shoulder flashes indicating their membership of the force and who would be given weapon training if necessary, would be carefully scrutinized before recruitment. No members of proscribed organizations would be allowed to join; nor would men who had been engaged in paramilitary activities be allowed to serve.

"It has been made clear to me that very many of the people of Northern Ireland wish to see a police service which commands the respect and cooperation of all the people," Mr Rees, residing from the start of his press conference. "I have made it clear that there cannot be what is popularly known as a 'third force'."

"However, my intention is to introduce a number of measures which will allow the gradual extension of normal policing services into all areas of Northern Ireland and to harness the widely expressed desire of men and women in Northern Ireland to play a part in ensuring the security of their own areas."

"This can only be done within the present framework of the police service. It will also mean that we shall need fewer soldiers in the province, but it is not a plan for pulling out."

Mr Rees asked whether his announcement about troop withdrawals was not a political move designed to help the Labour Government before a new election. He said that in no circumstances would he or the Government use the "Irish question" for political advantage. He wrote the letters to the wives and parents of policemen and soldiers who had died, he said, and he would not put the security of the province at risk for political purposes.

The RUC's recruiting target is to be raised to 6,500 and the women's establishment in the force will double to 750. In the reservists, the women's branch will go up from 250 to 500. For the first time there will be full-time women reserve constables with an establishment of up to 400. Full-time reservists will rise from 350 to 1,000.

The "search wardens", the unarmed men who check shoppers in the gated security streets in the centre of Belfast, are also to be increased by a further 100, and the system will be extended to Londonderry.

Leading article, page 13

£1.6m asked for news plant

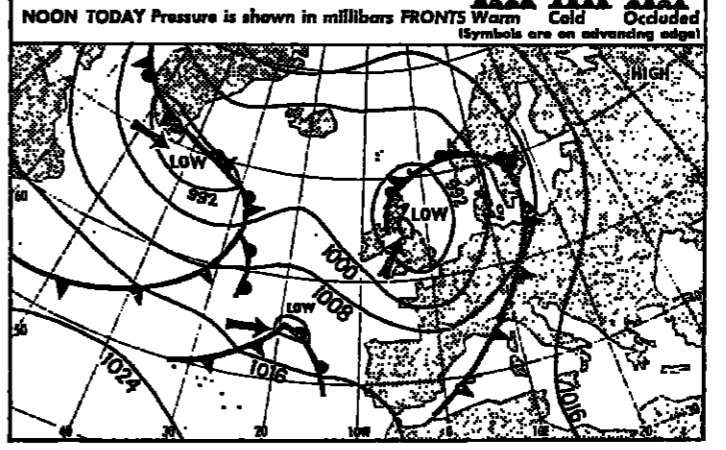
From Ronald Faux, Glasgow

The action committee of redundant Beaverbrook newspaper workers who plan to launch a *Scottish Daily News* announced yesterday that the Beaverbrook organization had offered the company's building and plant in Albion Street, Glasgow, for £1.6m.

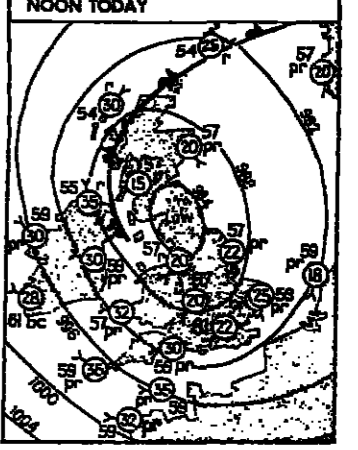
Already the committee had £400,000. With investment promises and other loans from government union and private sources, it calculated that another £300,000 would be required to buy the building and launch the paper.

Weather forecast and recordings

NOON TODAY Pressure is shown in millibars FRONTS Warm Cold Occluded (Symbols show an advancing edge)



NOON TODAY



Today Sun rises: 6.16 am Sun sets: 7.44 pm Moon sets: 8.10 am Moon rises: 7.47 pm

Last quarter: September 9 Lighting up: 8.14 pm to 8.47 am; max temp 16°C (61°F). Lake District, Isle of Man, NE England, Borders, SW Scotland: Heavy showers or longer periods of rain, bright intervals. Wind variable moderate, becoming SW strong or gale; max temp 15°C (59°F).

5 Wales: Showers, heavy in places, sunnier intervals. Wind W gale, perhaps severe gale; max temp 17°C (63°F).

6 Midlands, N Wales, NW England: Heavy showers or longer periods of rain, sunnier intervals later; Wind SW gale or severe gale; max temp 16°C (61°F). Lake District, Isle of Man, NE England, Borders, SW Scotland: Heavy showers or longer periods of rain, bright intervals. Wind variable moderate, becoming SW strong or gale; max temp 15°C (59°F).

longer periods of rain, heavy at times, sunnier intervals.

Yesterday London: Temp: max 7 am to 7 pm, 18°C (64°F); min 7 pm to 7 am, 12°C (54°F). Humidity: 7 pm, 79 per cent. Rain: 24 hr to 7 pm, 4.0 mm. Bar: mean sea level, 7 mm, 992.3 millibars, rising. 1,000 millibars: 25.53a.

At the resorts 24 hours to 6 pm September 2

Table with columns for location, sun, rain, max, min, and showers. Locations include SCOTLAND, IRELAND, WALES, ENGLAND, and SW SCOTLAND.

WEATHER REPORTS YESTERDAY MIDDAY: c, cloud; f, fair; r, rain; s, sun.

Table with columns for location, sun, rain, max, min, and showers. Locations include AMSTERDAM, BRUSSELS, COPENHAGEN, GENEVA, LISBON, LONDON, MADRID, MILAN, NAPLES, PARIS, ROME, VALENCIA, ZURICH.

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David Broome fined

David Broome, the former world show jumping champion, was fined £1,000 at Uxbridge Magistrates' Court, Middlesex, yesterday, when he pleaded guilty to attempting to export currency illegally.

The court was told that when Mr Broome, aged 34, of Mount Balian Manor, Crick, Newport, Gwent, was stopped at Heathrow airport by customs officials he had \$4,705 currency in Dutch guilders and French francs in an envelope stuffed in the pocket of his overcoat.

For Mr Broome, who admitted the offence, it was stated that he was intending to repay a wealthy Dutch industrialist who had bought a horse from him that was later found to be lame.

Shadow Cabinet finishing election manifesto

By John Groser, Political Staff

As vague apprehension gave way to certainty yesterday among most shadow ministers that an October 3 election was inevitable, Mr Heath and those of his senior colleagues who were not away from London had a long meeting at the Commons to discuss the situation and finish the draft of an election manifesto.

'No surrender' call after prison escape

A woman claiming to be Pat Arrowsmith, the jailed pacifist campaigner who disappeared from an open prison on August 25, telephoned to the Press Association yesterday and said: "I have not the slightest intention of giving myself up."

She added that she did not intend to disclose her whereabouts or plans. Reading what appeared to be a prepared statement, she said that she did not wish to be incarcerated in Holloway and described herself as "political prisoner number 992892".

On Monday the Portia Trust, an association concerned with helping women in difficulties, wished to remain abreast of all developments up to the last possible moment.

It is possible that Mr Heath will hold a further Shadow Cabinet meeting this morning before the final "r" is crossed and the "i" is dotted in the manifesto. Though as one disenchanted Tory MP remarked last night, if the party leadership had not sorted out its campaign tactics by now what good would another minute or two be at the eleventh hour?

HOME NEWS

International control of research safety standards urgently needed, Nobel Prize winner says

From Pearce Wright Science Correspondent
The state of research into genetic engineering techniques was likened yesterday by Sir John Kendrew, FRS, giving the presidential address to the British Association for the Advancement of Science's meeting at Stirling University...

their genetic material. Scientists have used this natural occurrence to develop techniques for investigation into the basis of genetics.
The new situation described by Sir John has come with the discovery of how to carry out such transfers artificially under controlled conditions...

He likened this situation to that in nuclear physics. The present problem seemed more difficult for a number of reasons. The possible consequences of developments in nuclear physics were easier to predict in 1939, than were the possible consequences of gene transfer in 1974.
Owing to the war, nuclear research was carried out entirely within a military framework and was in fact contained within that framework.



The first squad of woman detectives for Surrey. They are, from left, Gwen Crossman, Mary Dobson, Clare Weedon, Pam Sweetman, Marilyn Fisher, and (rear) Nancy Faulk.

Police chief gets writs over pop festival

Mr David Holdsworth, Chief Constable of Thames Valley police, was served yesterday with three writs for damages arising from the Windsor pop festival.
Miss Diana Senior, aged 29, a teacher, is claiming £30 damages alleging the loss of a substantial hank of hair and a severe headache. She alleges that she was assaulted by an agent of Mr Holdsworth while playing Tibetan bells in a peace-inducing manner.

Jail and bans for rowdy football supporters

Prison sentences, bans on attending matches, and fines were imposed by magistrates yesterday on football supporters in various parts of Britain.
At Hove, Sussex, two Crystal Palace supporters were jailed for six months for inflicting grievous bodily harm on a policeman. Mrs Olive Dingwall, chairman, called them football parasites.

Manchester United was asked yesterday to pay for damage that the club's supporters caused to houses in Cardiff on Saturday. Mr George Thomas, MP for Cardiff, West, has written to Mr Tommy Docherty, the United manager, contending that it is the club's responsibility to pay for the damage.
South Wales police said that 41 of the 55 people arrested at the match were from South Wales. Only nine came from Manchester.

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Five jailed for Leeds prison corruption

Three prison officers and two prisoners who were involved in smuggling goods into Leeds prison were given jail sentences at Leeds Crown Court yesterday.
Donald High, aged 40, a prison officer, was sentenced to 12 months. Geoffrey William Arundale, aged 31, a prison officer, was sentenced to 12 months. Ronald Ambler, aged 48, a prisoner, was sentenced to 12 months.
Judge Dean, QC, told Mr Hargreaves and Mr Ambler: "I think you were the rammers and errand boys for even more sophisticated criminals."

Former mayors for trial accused of conspiracy

From Our Correspondent Wakefield
Four men, two of them former mayors, appeared at Pontefract Magistrates' Court, West Yorkshire, yesterday, on conspiracy charges in connection with the Poulson affair.
They are Roy Hadwin, aged 49, a former Lord Mayor of Newcastle upon Tyne, of St Thomas Square, Newcastle; Peter Ward, aged 54, of Old Orchard, Rothbury, Northumberland; Colin Dews, aged 64, of Glebe Street, Castleford, West Yorkshire, former Mayor of Castleford and now chairman of Wakefield District Council education committee; and Tom Roebuck, aged 49, of Elm Road, Mexborough, South Yorkshire, a member of Do-

Mrs Castle accused over family allowance delay

By Our Social Services Correspondent
Mrs Castle, Secretary of State for Social Services, was accused yesterday of using "utterly unconvincing" administrative reasons for delaying the extension of family allowances to the first child until 1978.
All political parties were committed to the reform. Sir Brandon Rhys Williams, Conservative MP for Kensington and chairman of the Family Allowance Movement, said yesterday. Yet Mrs Castle was making difficulties about getting the forms printed, finding office space and recruiting staff.
More than seven million children do not benefit from family allowances because they are the first or only children in their families. The movement, formed last month by several children's and poverty groups, wants family allowances extended to them next April.
In a letter to Sir Brandon,

HP-45

Doubles the power in your pocket

The era of the advanced pocket calculator began when Hewlett-Packard introduced the revolutionary HP-35. Now the pioneer is joined by an even more advanced pocket calculator, offering even more power, more functions, more performance—the HP-45.

Power packed! Of course, HP-45 tackles problems involving logs, trig, roots and exponents as well as simple arithmetic. But it's also raring to go on register and vector arithmetic. Percentage, n-factorial and statistical functions are pre-programmed in; conversion factors, too.

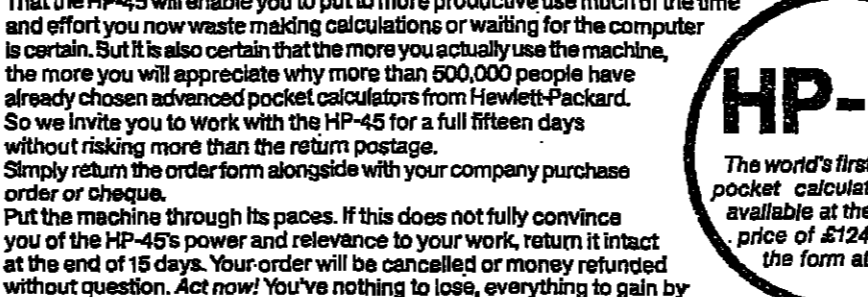
So easy to use Although the ingenious HP-45 makes 35 keys do the work of 58, its layout is so logical and direct that you will feel completely at home after doing a few calculations. An operational stack, coupled with reverse Polish notation, provides the most efficient method known to computer science of evaluating mathematical expressions. And an exclusive quick reference guide provides key-by-key instructions for the main functions.

14 registers: 9 memories The first four form the operational stack, with automatic storage and retrieval of intermediate solutions and review of stored data at any time. 9 memories are yours to command. Separately addressable, you can store data in them, and retrieve it at will and you can perform register arithmetic. Register 0 stores the last 'x' for error correction.

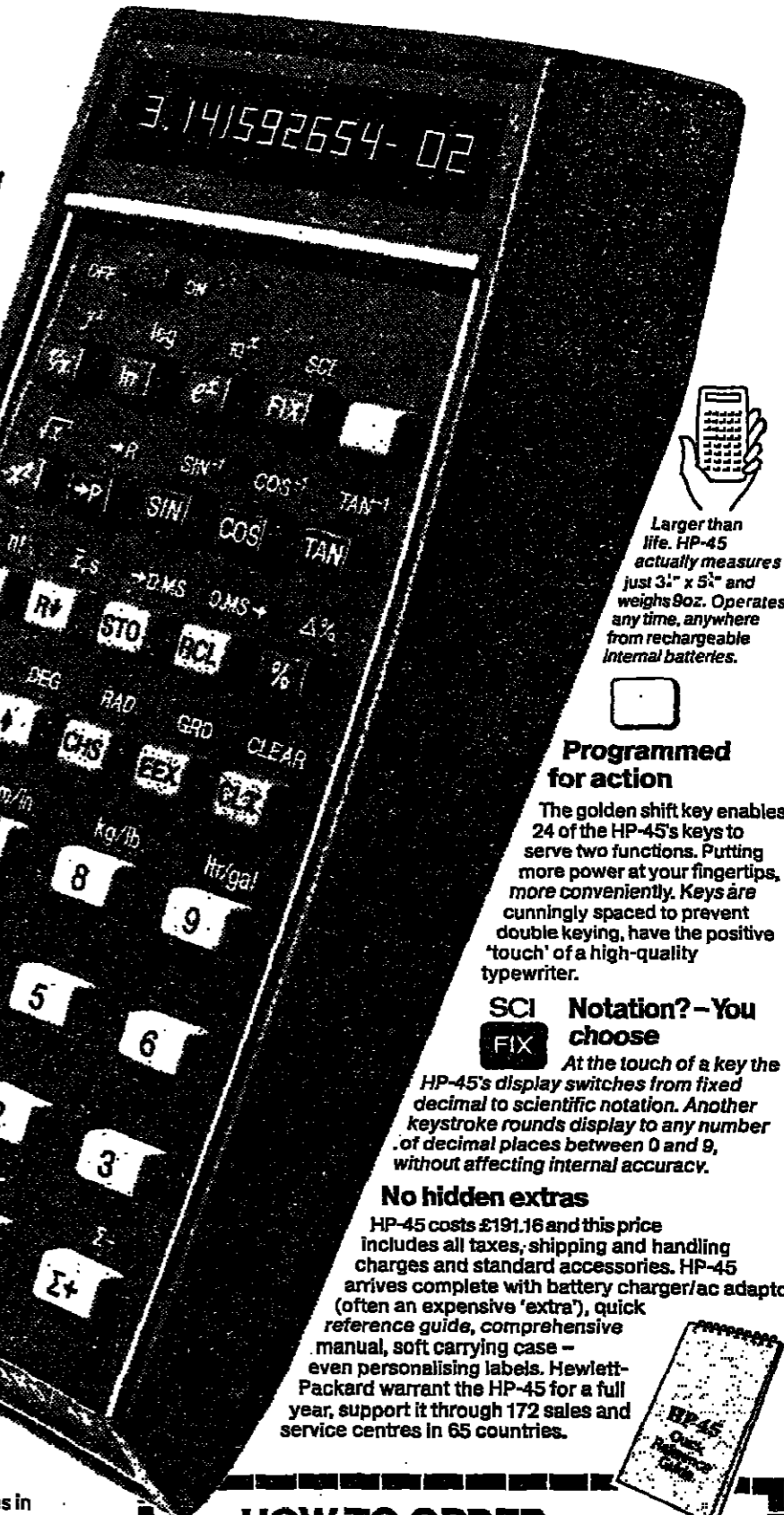
200 decade range HP-45 operates over a range of a full 200 decades — 10⁻⁹⁹ to 10⁺⁹⁹. It displays answers to ten significant digits — plus two-digit exponent, sign and decimal point. In arithmetical operations, errors are confined to the least significant digit.

Practical functions simplify problem-solving In trig, for example, HP-45 operates in degrees, grads or radians. It is pre-programmed to convert decimal angles to degrees/minutes/seconds, polar co-ordinates to rectangular, centimetres to inches, kilograms to pounds and US gallons to litres. And naturally, vice versa.

15 DAYS FREE TRIAL. That the HP-45 will enable you to put to more productive use much of the time and effort you now waste making calculations or waiting for the computer is certain. But it is also certain that the more you actually use the machine, the more you will appreciate why more than 500,000 people have already chosen advanced pocket calculators from Hewlett-Packard. So we invite you to work with the HP-45 for a full fifteen days without risking more than the return postage. Simply return the order form alongside with your company purchase order or cheque. Put the machine through its paces. If this does not fully convince you of the HP-45's power and relevance to your work, return it intact at the end of 15 days. Your order will be cancelled or money refunded without question. Act now! You've nothing to lose, everything to gain by grasping this opportunity.



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Form with fields for Name, Position, Company/Institution, Address, Postcode, Acct. No., and checkboxes for HP-45 and HP-35 purchase options.

Pharmacists' plan to cut waste of tablets

From John Roper Medical Correspondent Nottingham
A system of repeat prescriptions, which it is hoped, will cut the quantity of medicine issued to a patient at one time, is likely to be brought in soon, after a meeting of doctors, chemists and Department of Health officials.
Mr Charles Stevens, in his presidential address to the Pharmaceutical Society annual conference at Nottingham yesterday, said the scheme should eventually spell the end to all overfed medicine cabinets in the land.
The doctor would still be able to prescribe whatever he wished, but instead of sending a patient to collect, say, a

HOME NEWS

Thorpe plan to rescue Britain with minimum pay as price of wage control

Britain, with debts accumulating at £4,500m annually, is on her own and can be saved only by unity in adversity, Mr Thorpe, leader of the Liberal Party, said yesterday. Speaking in Brighton, he said:

The message which I bring to the people of this country is not a happy one. It is vitally necessary that we should all be aware of the grave dangers to our economy and democracy which together we must overcome if this country is to survive.

The stark facts are that we are living beyond our means, the Government is borrowing far more than it can ever hope to repay; our debts are accumulating to the tune of £4,500m annually and there is no single panacea which can rescue us.

We are on our own and only our common behaviour, as a nation united in adversity, can save us.

How are we to achieve this unity of purpose? Only by squarely recognizing our problems. Some politicians would have us believe that all is well and there is no crisis. All is not well, and they know it. Wherever I go I find people who accept the realities of our situation.

They are not involved in the intricacies of budget-balancing but they scent the danger when inflation erodes their purchasing power by 20 per cent a year; when the country is constantly crippled with debilitating strikes over exorbitant wage claims; when the Stock Exchange is lower than 30 years ago and firms which represent all that is best in British craftsmanship lie on the brink of bankruptcy.

The British people will not be put off with denial, empty promises of good times to come, or by frankly devious attempts to play off one section of the community against the other. This crisis is real and nothing will be gained by trying to sweep it under the carpet with a general election.

I recall a party leader, who, as Prime Minister, delayed necessary measures of rearmament until we were on the brink of war with Nazi Germany for which we were ill prepared. In his defence, he later claimed that to preach rearmament to a pacific country would have had disastrous electoral consequences for his government.

That man was Stanley Baldwin. I hope that no leading politician in this country will be deluded into playing the same game at the expense of our economic future. We must take action now.

The first thing to do is to end the shilly-shallying over a strategy of prices and incomes policy. Why does Mr Wilson say that he will not consider one and Mr Heath grudgingly admit that it is a possibility of last resort?

Whether anybody likes it or not, the next government will have to introduce such a policy within the next three months. I suggest that the other party leaders should come clean with the electorate and tell them this. For unless they do so and prepare the measures necessary to gain the acceptance of the whole nation for this policy, it will be doomed to failure.

The attempts by Labour and Conservative governments in 1967 and 1971 were shock therapy and failed because there was no attempt made beforehand to gain national acceptance. To ensure that this is forthcoming, a programme of social reform is necessary, including the following seven points which must be nothing short of a social compact between the people of this country and the government of the day.

1. A commitment to the poor—the 4,500,000 working people who earn less than £25 a week. I want statutory minimum earnings corresponding to two-thirds of the average wage, introduced over a three-year period, starting immediately. It means a guaranteed wage of £25 for a normal working week; a minimum of 1 per cent a year increase in the national wage bill and a corresponding cut in the expectation of above-average wages.

2. I want an immediate commitment from the Government to the basic state pensions to a stated percentage of national average earnings as an automatic index against inflation and to ensure that pensioners are not left behind in the wage race.

In my view the target to be achieved, again over a three-year period, is 50 per cent of average earnings for a married couple and 40 per cent for single people. £21 and £14 respectively. It will cost £1,400m, which must be raised through fully graduated social security tax—representing the present contributory system, which exerts far less, proportionately, from the high income group than the low-paid and self-employed.

3. The indexation of savings and equity bonds against inflation to protect these deposits of their savings and encourage greater investment. This should be accompanied by a far greater degree of austerity and care in the deployment of public money.

4. The introduction of new flexible mortgage schemes, particularly to help the first-time buyer to overcome the twin problems of escalating house prices and high interest rates. I want an end to fiddling with the market and to stoking inflation through subsidizing the building societies. We should be the more selective in the money which we hand out for house purchase. It should go to people, not institutions.

5. A careful reappraisal of the prospects for investment with the Government through the NEDC (National Economic Development Council) initiating a series of consultations with major industry. Where the economic advantages to the nation would be enhanced by investment in certain industries, the Government should be prepared to underwrite the necessary finance for a limited period.

6. A commitment to legislate, in the next session of Parliament, to restructure industrial relations on a partnership basis. The legislation should be mandatory but indicative, rather than specific.

7. A further commitment radically to overhaul the entire social welfare system to eliminate means tests and unnecessary duplication between the Inland Revenue and the Department of Health and Social Security. My preference is for the introduction of a full-scale tax credit scheme which would include allowances for tenants and house buyers alike. I acknowledge that this will take time to implement, which is why the Government must protect the most vulnerable families with other measures in the next three years.

These seven policy points constitute the minimum necessary action to save the country from the perils of bankruptcy, poverty, and unemployment, and to gain the necessary consent for the introduction of a compulsory prices and incomes policy, with tax sanctions against those who attempt to break the policy of restraint.

Time is short and the country is waiting for someone to take a grip on its affairs. If our democratic leaders fail, there are other, less discerning individuals, who will have no scruples about using more painful instruments of repression. We dare not allow them the chance. It is time for action.

Farmers' leaders call on Mr Peart to take steps to relieve livestock producers

By our Agricultural Correspondent

Steps to relieve the difficulties of livestock producers were urged by leaders of the three United Kingdom farmers' unions when they met Mr Peart, Minister of Agriculture, Fisheries and Food, and Mr Hugh Brown, Parliamentary Under-Secretary at the Scottish Office, for two hours at the ministry in London yesterday.

The farmers' leaders warned Mr Peart that the substantial fall in spendable farm income forecast for the current year would have a very serious effect on farmers' ability to meet home food demand. Decisions were needed now to deal with the crisis in milk, livestock and poultry production.

Sir Henry Plumb, president of the National Farmers' Union of England and Wales, said afterwards: "Our best estimates indicate that unless action is taken, spendable farm income will fall by about 50 per cent in the current year and a far greater fall will result in the livestock sector. This will take the farm income situation back to the depressed level of the late 1960s, and in real terms the loss would be substantially greater in view of the fall in the value of money during the past five years."

The cut in production already shown in a number of sectors would extend further, affecting consumers as well as farmers, stock workers and workers in supply and processing. The danger could be averted only by a substantial cash injection this autumn.

The minister said he recognized the importance that the farmers' unions attached to action during the autumn, but he hoped that would be possible at the meeting of European Economic Community farm ministers in Brussels today to clear the ground for further decisions by the Council of Ministers on September 23 and 24.

Among points pressed by the unions was an increase in the guide price for beef to take account of the true value of the pound relative to the EEC unit of account; the present scheme of direct payments should continue with further supplementary payments if producers' average returns fail to reach the adjusted intervention price.

They called on the minister to make clear in Brussels that the best support system should be overhauled for next year, with the institution of a premium payment scheme, reinforced by guaranteed minimum prices in countries that did not wish to implement intervention. There should be a substantial immediate increase in the guaranteed price for milk direct payments for pigs and sheep to be extended, and the value of the pound must be used in determining those payments.

They also pressed for some protection of the egg market from imports at unduly low prices from the Continent, particularly France, which excluded our egg exports, and asked for consideration of a system of headage payments to producers to meet their immediate problems.

Orkney "crisis": Mr Grimond, Liberal MP for Orkney and Shetland, and Mr Jack Teit, president of the Orkney National Farmers' Union, sent a telegram to Mr Peart yesterday saying: "Urge realistic guaranteed prices be introduced at once. Crisis in Orkney and Shetland. Fat cattle around £16 and sheep around £10. No sale for Shetland lambs to Aberdeen" (our Orkney correspondent reports).

Mr Grimond said: "I was at the Kirkwall mart this morning, where prices for fat cattle were over £2 below the guaranteed minimum set by Mr Peart himself."

Tories will back independent aero industry

By Arthur Reed
Air Correspondent

On the eve of the visit to the Farnborough Air Show today of Mr Benn, Secretary of State for Industry, Conservatives came out strongly against the proposed nationalization by Labour of the British aircraft industry.

Mr Kenneth Warren, chairman of the Conservative parliamentary aviation committee, and Mr Eldon Griffiths, shadow Minister for Trade, in a letter to Sir Harry Broadhurst, president of the Society of British Aerospace Companies, said: "All experience shows that nationalization would not improve the industry's efficiency or level of production; but that it would blunt its competitive edge."

"Nationalization would add enormously to the taxpayers' expense, while providing no more security whatever for the industry's work force."

The letter said that a Tory government would stand by the industry in honouring its export contracts. It would seek to improve the use of the government research establishments to advance the state of the art in British aeronautical engineering, and in particular it would encourage a big effort to reduce aero-engine noise.

"Too many people have suffered far too long from noisy aircraft. We are confident that Britain's aeronautical scientists and engineers can meet this challenge quickly," it said.

Mr Benn is due to tour the Farnborough Show this morning and will fly in the Lockheed SR-71A aircraft powered by the Rolls-Royce RB211 engine.

Resolution lists conditions for wage restraint

Continued from page 1

The general council yesterday nodded through resolutions on economic policy and the social contract, and decided without a vote to recommend delegates to reject militancy.

A decision was taken with the AUEW leaders present, but they did not speak. It suggests that the AUEW will be supported only by Civil Service unions with a combined membership of about 300,000 and a few other white-collar unions, including the journalists. Mr Wilson will thus be able to claim on Thursday, when he addresses the congress that the unions accept voluntary wage restraint in a ratio of about four to one.

After the psychological shock of the engineers' decision it appears that a reaction has set in. Even the militant train drivers and the Association of Scientific, Technical and Managerial Staffs (ASTMS) have hesitated over the issue and will not make up their minds until today or at the end of the debate. Others, like the agricultural workers are taking the classical trade union way out, of voting for everything.

An attempt by Mr Jack Jones, general secretary of the Transport and General Workers' Union, to get the engineers to reconsider their line got no further yesterday. The jealous leaders, traditionally driven by more than their political to the expression of hope that the unions should line up solidly behind the social contract.

The anti-contract resolution being proposed by a technical and supervisory section of

are AUEW, and seconded by the Civil and Public Services Association, declares that a social compact can be accepted by trade unionists only when "substantial progress" has been made on eight points in the "alternative strategy" of the TUC-Labour Party liaison committee.

The demands, described by Nalvo as "pie in the sky", are: a progressive economic policy; a vast increase in house building, particularly for the low-paid; municipalization of rented property; public ownership of housing land; wide-ranging and permanent price controls; vastly improved social services; more public ownership and state supervision of private corporations; generally worded resolutions.

Ranged against that policy, which will attract only about a quarter of the 10 million congress votes, are two more generally worded resolutions. The first, on the social contract, promises full support to efforts being made by the TUC and the Government towards righting the economy, and reiterates the TUC's faith in free collective bargaining.

The second resolution, on economic policy, welcomes the abolition of the Pay Board and calls for a "progressive economic policy" covering prices, profits and all kinds of income. It declares that any future policy affecting income agreed with the Government must be preceded by adequate prior consultation within the TUC.

Those two resolutions will be overwhelmingly endorsed.

TRADES UNION CONGRESS

Civil servants' leader threatens industrial action as unions vote to campaign against private agencies

From Our Parliamentary Staff
Brighton

A composite motion calling for a campaign to end the use in the public service of staff recruited from private fee-charging employment agencies was carried without dissent on the opening day of the Trades Union Congress in Brighton yesterday.

MR WILLIAM KENDALL, general secretary of the Civil and Public Services Association, said that in two weeks his members, particularly in London, would start industrial action intended to stop the employment of such staff in the public sector (cheers). Governments had done nothing effective, he said, to curb the agencies' activities.

The motion reaffirmed the trade union movement's opposition to private fee-charging agencies, deplored their "parasitic nature", and recorded concern at their effect in undermining union bargaining strength.

It also expressed concern at the ineffectual nature of the Employment Agencies Act, a private member's measure, and called for fresh legislation to comply with the International Labour Organization's convention on abolishing agencies.

It asked the general council to use TUC industrial committees and to create ad hoc machinery for the public sector to end the employment of agency staff in the public service.

MR GLYN LLOYD, of the Union of Construction, Allied Trades and Technicians, who moved the motion, said that the fee-charging agencies worked on the principle of "here today and gone tomorrow". Collective bargaining meant nothing to agency staff, and good industrial relations could not be maintained in the building industry when directly employed craftsmen received far less than those using the services of agencies.

The trade union movement was resolutely opposed to the continuing existence of the agencies and they would no longer tolerate them living off the backs of the people the movement represented.

Mr Kendall said that the draft regulation Mr Foot, Secretary of State for Employment, had presented to the general council as a "reasonable alternative" to abolition of the agencies was nothing of the sort.

He believed Mr Foot's action to be a marginal perversion of understanding rather than a deprivation of heart. The employment service was a social service which it was not safe to entrust to private enterprise.

Dealing in human bodies continued to be as attractive as in the days of the slave trade, and

it was no wonder that the number of agencies was about 3,000. Agency staff made no contribution to the organized trade union movement.

Miss Audrey Prime, of the National and Local Government Officers' Association, said that her union's main objection to the agencies was that they undermined the trade employment service, which was being reorganized.

It was essential that the manpower Commission, to which the service was to be transferred, should operate effectively. That would not be remotely possible unless the private agencies were abolished.

Mr E. Dix, of the National Union of Public Employees, said that a Federation of Personnel Services had begun distributing press releases showing what a socially useful service private agencies were doing, particularly in the National Health Service.

Most agency employees were in the "push" teaching hospitals, he said. Now many agency staff did not see a general and psychiatric hospitals?

Mr Christine Page, of the Union of Shop, Distributive and Allied Workers, said that half the 3,000 agencies were not even covered by their own professional employers' organizations. Those were the ones most likely to deal in "lump labour".

The agencies' total turnover was about £50m a year and varied between 50,000 in the winter and 90,000 in the summer. Last year, two fifths of all office staff was placed by agencies, as compared with 7 per cent replaced by the employment service.

Her union was opposed to the agencies because they were inflationary.

Diary, page 12
Leading article, page 13



Faces at the congress yesterday: From the top, Mr Len Murray, TUC general secretary; Mr Richard Brightshaw, of Natsofa; and Sir Sidney Greene, of the railwaymen; Mr Alan Sapper, of the cinematograph technicians; and Mr Kenneth Gill, of the engineering workers.

Concern over shortage of trained workers

Mr Leslie Buck, secretary of the National Union of Sheet Metal Workers, Coppermiths, Heating and Domestic Engineers, expressed concern that the future expansion of industry might be adversely affected by the shortage of trained workers.

He moved a motion, which was agreed, calling on the TUC to press the Government to restore the principles of industry's commitment to training contained in the 1968 Training Act, and calling for greater involvement of workers' representatives in the creation and development of training at the work place.

There should also be a right of all workers to day release for training and educational and examination of training and retraining opportunities.

There had been serious interference with the training programme, arising from the former Conservative Government's document, *Training for the Future*, and the Training and Employment Act. That legislation had seriously affected the programmes of training down by the training boards.

Employment difficulties in recent years had sharply affected the attitude of employers to training and there had been a notable fall in the number of apprentices and other people taken into training.

That should be looked at by the Manpower Services Commission as the difficulties would affect it in the future.

Dr Judith Gray, of the medical practitioners section of the Association of Scientific, Technical and Managerial Staffs, said 10.4 per cent of girls in employment had day release, compared with 29.7 per cent for boys. Only 7 per cent went into apprenticeships compared with 42 per cent of boys.

Motion to abolish women's conference defeated

A motion to abolish the TUC Women's Conference was lost after a show of hands.

The motion, moved by Mr Jerry Gillman, general secretary of the Society of Civil Servants, said that the continuation of a separate representative body for women within the TUC was an anachronism. The difficulties facing women workers would not be solved by a right degree of priority until they were seen as those of workers and not merely of women.

Mr Gillman said that the quality of debate and standards of thought at the women's conference should be brought to the congress.

Miss Katie Doyle, of the National Union of Journalists, said the idea that a special place was needed for women to get together and have a chat year after year was condescending.

Mrs Margaret Morrison, of the Civil Service Union, said the women's conference was an ideal training ground for women new to conferences and committees. It provided a good sounding platform for women's views.

Mrs Shirley Miles, of the technical, administrative and supervisory section of the AUEW, said it would be wrong to abolish the separate rights of women in the TUC.

Mrs Marie Patterson, chairman of the women's advisory committee and chairman of the women's conference, said that the women's conference in 1972 and 1973 had defeated attempts to abolish the conference. She did not believe in giving up anything until she was sure it was going to be replaced with something better.

The congress adjourned until today.

AUEW 'cash difficulties'

From Raymond Perman
Labour Staff

Britain's second-largest trade union, the Amalgamated Union of Engineering Workers, is facing financial difficulties according to one of its most senior executive council members.

Mr John Boyd says that the union's assets have dropped from £10m to less than £11.75m at the beginning of this year, and that arrears in subscriptions now amount to £2m.

Mr Boyd, champion of the right wing and a bitter anti-communist, is one of the two

leading contenders for the post of general secretary of the union. He makes his points in an election address to members of the engineering section.

His financial difficulties are not shared by Mr Bob Wright, left-wing member of the Labour Party who claims the support of 41 national and local officials of the union. In his address he says he will pursue democracy within the union and seek to make it smoother running.

The post of general secretary has been vacant since the death of Mr Jim Conway in the Paris air crash earlier this year.

Communist gets seat on general council

From our
Labour Editor

Election results for the TUC General Council being declared today will show a pronounced swing to the left, with the communists capturing a seat for the first time in a decade.

Mr Kenneth Gill, general secretary of the technical and supervisory section of the Amalgamated Union of Engineering Workers, has collected about seven million votes, and becomes the first member of the Communist Party to hold a seat on the general council since the short-lived term of Mr Will Faynter in the early 1960s. Mr Gill's union is leading the attack against the general council's wage restraint measures.

Two other left-wingers, Mr Jim Slater, of the National Union of Seamen and Mr Clive Jenkins, of the Association of Scientific, Technical and Managerial Staffs, are also expected to be elected with substantial majorities, but the left wing's challenge to Mr Tom Jackson, the postmen's moderate leader, seems likely to fail.

Government decisions must take heed of voice of labour, Lord Allen says

From Alan Hamilton
Labour Staff

Government could no longer afford to take any decisions without first hearing and heeding the voice of the organized trade union movement, Lord Allen of Fallowfield, president of the TUC, said in his opening address to the 106th congress in Brighton yesterday.

Both the Government and the TUC carried a great responsibility for the future economic course of the nation, and neither side could afford to ignore the long-term implications of failure of the "social contract".

The most important task facing the trade union movement was to convince the people who ran industries that the social contract could work and must be made to work.

The Government, he said, had striven under difficulties to act with strength and purpose, but had often found itself frustrated because of the shifting, vacillating, hollow alliances of small groups in opposition basing in a false sense of power. He singled out Aims of Industry for particular criticism.

"In this situation all of us, without exception, must be aware of the influence we collectively bring to bear on the major current political and economic issues confronting us. Those we represent and the community generally," he said.

"The experience of some nine months ago demonstrated beyond all doubt that any govern-

ment which ignores the collective voice of the trade union movement does so at its peril."

Lord Allen continued: "No longer can governments and our movement operate at arm's length of each other. In a highly industrialized and economically vulnerable society, no decision can be taken by government without first hearing and heeding the voice of the organized trade union movement."

By the same token the trade union movement could not disregard the views of a democratically elected government.

Radical and long overdue economic and political changes were coming about as a result of the present understanding between the Government and the TUC.

"Clearly, the question today and in the immediate future is not who shall control the levers of power in the economy—the Government or the trade unions, as the electorate was encouraged by the Tory Administration in the last general election—but can there be agreement between them on aims and objectives?"

Common commitment by all in our current situation is the best way I know, indeed the only way, of retaining our independence and freedom from legal restraints."

Referring to the responsibility that the social contract placed on both sides, he said: "As long as the contract remains in the last general election—but can there be agreement between them on aims and objectives?"

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Manpower plans to combat any rise in jobless

The Government would be expected to act against any rise in unemployment, says Daniel McGarvey, of the boiler-makers union and a member of the Manpower Services Commission.

Introducing the section of the general council's report on employment developments, he said that the commission had been much concerned during the past few months to prepare plans against the possibility of a rise in unemployment.

"That does not mean that we accept that there will be an increase in unemployment," he said, "but we believe in being prepared. We would be expecting quick action by the Government to counteract any possible trend in unemployment if it began to show through."

The commission also should be ready to take quick action, he added. It had produced a plan to provide greater opportunities to those who lost their jobs through technological change and intended to give priority to young people, especially those not apprentices.

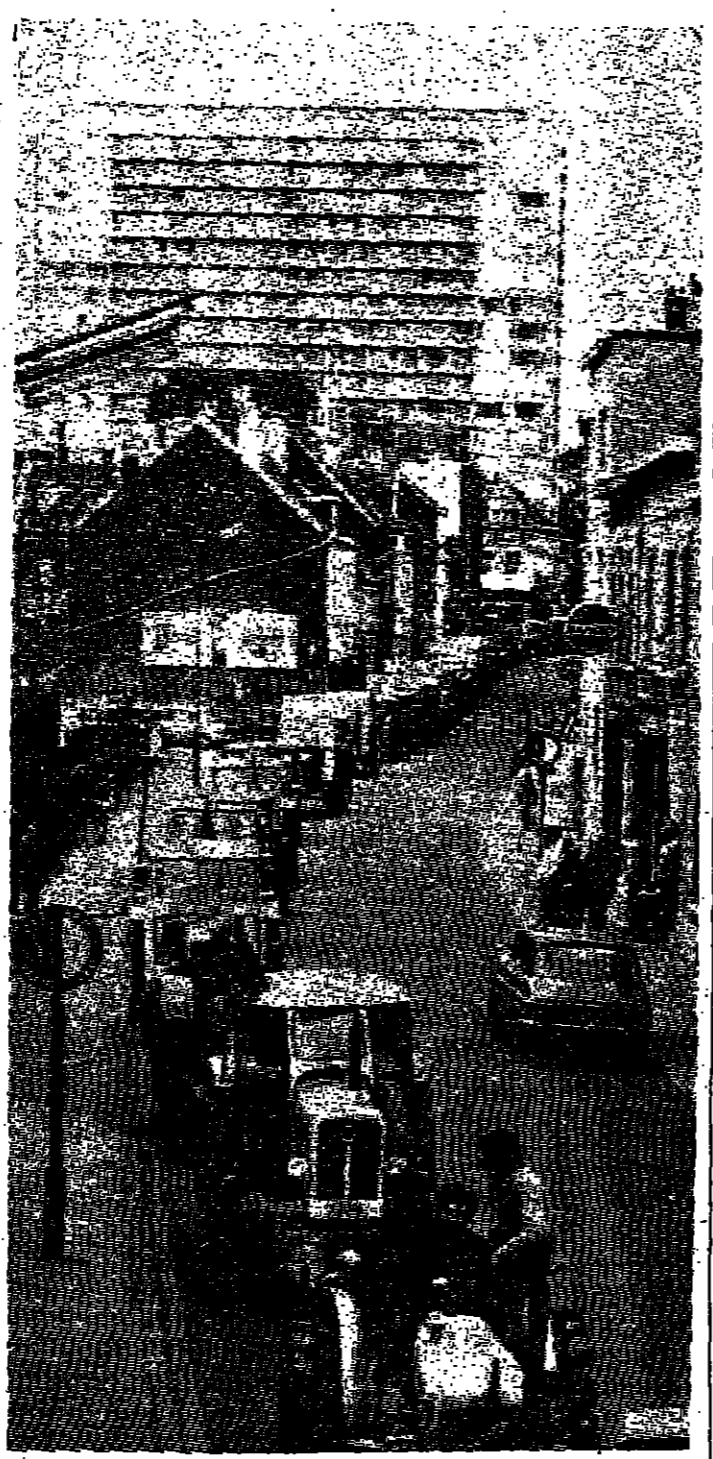
"Another scheme the commission have in mind would enable school-leavers to undertake a first-year apprenticeship course on a full-time basis. In the meantime, the employment service would be arranging for them to be placed with an employer to complete their apprenticeship."

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WEST EUROPE

French Government seeks public's help to fight price rises

From Richard Wigg Paris, Sept 2. M. Fourcade, the Economics Minister, today launched a campaign to mobilize public support in combating rising prices. It represents the popular propaganda arm of the Government's anti-inflationary package...



Tractors in the streets. This demonstration in Brussels yesterday was typical of protests all over Belgium as farmers demanded higher prices for their products.

Favourable EEC response to Greek overture

From Roger Bertoud Brussels, Sept 2. The European Commission has responded favourably to the new Greek Government's formal request of last week for closer links with the EEC.

New farm protest in Belgium

From David Cross Brussels, Sept 2. Belgian farmers are keeping up their pressure on EEC member governments for an immediate big increase in Community farm prices.

Sweden to give 1 per cent in aid to underdeveloped

From Our Correspondent Stockholm, Sept 2. The Swedish International Development Authority today unveiled an ambitious foreign aid programme for the next budget year which would amount to at least 1 per cent of Sweden's gross national product (GNP).

Mutiny in Bonn jail over tasteless Sunday meal

From Dan van der Vat Bonn, Sept 2. A sub-standard Sunday dinner led to a mutiny in Bonn prison which lasted until the early hours of this morning, officials confirmed today.

Paris placates farmers in Corsica

From Our Own Correspondent Paris, Sept 2. The French Government bowed today to three days of disturbances by Corsican farmers. Meeting in Paris under M Chirac, the Prime Minister, an interministerial committee approved immediate relief measures for the Mediterranean island.

Fascist salutes at Borghese burial

From Patricia Clough Rome, Sept 2. Prince Junio Valerio Borghese, the war hero who was alleged to have headed an abortive Fascist plot in 1970, was today laid to rest after an impromptu and enthusiastic "funeral procession" by sympathizers amid Fascist salutes and cries of "Italy, Italy, Fascism, Fascism".

OVERSEAS

Addis Ababa crowds quietly watch marchers calling for the Ethiopian Emperor's removal

Addis Ababa, Sept 2. Demonstrators carrying placards and demanding the abdication of Emperor Haile Selassie paraded along a main street of Addis Ababa today. The demonstrators—several dozen students, unemployed men and some children—called for the "dismissal" of the Emperor.

Hurricane threat to British colony

Belmopan, Belize, Sept 2. Hurricane Carmen, with winds up to 175 mph, today bore down on this British colony in central America, sending residents fleeing to the inland capital of Belmopan. Belize city, wrecked by Hurricane Hattie in 1961, was battered down and shelters filled up with a stream of people carrying children, bedding, pots and pans.

Police said to have shot Allende men

Washington, Sept 2. Two supporters of the former President Allende were shot dead after being detained by Chilean police near Santiago, The Washington Post reported today. The two men, one a doctor, were the victims of what appeared to be the first summary executions in Chile since the military junta that overthrew President Allende last September.

Palestinians tell US they want talks

Cairo, Sept 2.—The Palestine Liberation Organization has communicated to the United States its readiness to have direct high-level consultations with American officials on the Palestine problem, a source close to the PLO said today. The only condition the PLO attaches is that the meetings be publicized and not held secretly.

Joint talks cancelled after discovery of mass grave

Continued from page 1 The United Nations spokesman reported, at his daily press briefing, the burning of the Greek Cypriot village of Loutrou in north-west Cyprus. The village, abandoned by its inhabitants, lies in the area occupied by the Turkish Army.

Zagreb train disaster to be reenacted

Zagreb, Sept 2.—Yugoslav authorities plan to reenact the Zagreb train disaster, probably on Wednesday, to clear up the mystery surrounding the crash in which at least 124 people died and more than 50 injured.

Fresh flooding hits three Indian states

From Our Own Correspondent Delhi, Sept 2. New floods hit Bihar, West Bengal and Assam today, paralyzing communications and causing widespread damage. The population in the affected areas is about 15 million.

Mr Fulbright leads US delegation to China

Peking, Sept 2.—A delegation of seven members of the United States Congress arrived in Peking today for a two-week visit to China. They are likely to discuss the possibility of an invitation to President Ford to visit China.

Radiation leak halts Japan's nuclear ship test

Tokyo, Sept 2.—Japan's first nuclear-powered ship, the Mutsu, has suspended her reactor test in the North Pacific after radiation leakage, according to reports reaching Tokyo today from journalists on board.

Advertisement for HENRY WORTHINGTON EUROPEAN TECHNICAL AWARD. The advertisement describes the award as a contest for technical papers on fluid machines and energy conversion, sponsored by the Executive Commission of the EEC. It lists prizes and contact information for the award.

OVERSEAS

Frelimo and Portugal to begin formal talks in Lusaka this week on independence

Dar es Salaam, Sept 2—The Mozambique Liberation Front (Frelimo) and the Portuguese Government will begin formal negotiations this week to transfer power to an independent Mozambique. The negotiations in Lusaka, beginning on Thursday, will set a date for independence and work out the "quickest mechanism" for handing over power to a Frelimo Government.

The President of Frelimo, Mr Samora Machel, told a press conference at his Dar es Salaam headquarters today that he was confident the peace talks to end the 10-year-old guerrilla war and 300 years of Portuguese rule would be successful.

The Lusaka meeting is the climax of three months of contacts between the two sides which, according to informed diplomats in the Tanzanian capital, laid the groundwork for independence and a new administration in Mozambique. The diplomats said basic agreement on the principle of an independent Mozambique had been worked out three weeks ago at a secret two-day meeting in Dar es Salaam between Mr Machel and Dr Mario Soares, the Portuguese Foreign Minister.

Brigadier in Salisbury to start new job

From Our Correspondent Salisbury, Sept 2—Brigadier John Probert, a former British Army officer who served with the occupation forces on the Rhine, has arrived in Salisbury to take up his post as chief executive officer of the city.

Kashmir parties turn down Pakistan plan

From Our Correspondent Rawalpindi, Sept 2—A formula for the Pakistan part of Kashmir (Azad Kashmir) adopted at the behest of the Pakistan Assembly last week has been repudiated by the Kashmir Liberation League.

Khrushchev bust by 'donkey tail' sculptor

Moscow, Sept 2—The only monument in the Soviet Union to Nikita Khrushchev, the former Prime Minister, was placed in a Moscow cemetery today.

Mr Whitlam and trade unions agree to differ

From Our Correspondent Melbourne, Sept 2—An effort to improve relations between the Whitlam Government and the trade union movement was made today at a conference at which both sides expressed their views freely and frankly.

Lack of crèches holds up work on Siberian dam

Moscow, Sept 2—Work on a huge hydro-electric power dam in Siberia is being held up by a shortage of baby crèches, as well as concrete mixers and skilled hands.

Wave of killings and bombings is threatening to wreck the Government of Señora Isabel Perón

From Stuart Sterling Buenos Aires, Sept 2—"I know that many think that as I am a woman, I am unfit to take the helm. But I have two arms and in one hand I have the Peronist left and in the other, Eva Perón."

Construction of the Sayanskaya-Shushenskaya dam on the Yenisei river some 300 miles south of Krasnoyarsk, is lagging as workers join, then melt away.

Jail and 10 strokes for drugs case Malaysian

Singapore, Sept 2—A Malaysian was sentenced today to 10 years in jail and 10 strokes of the rotan (cane) for possessing Heroin and morphine worth more than \$650,000 in the retail market in the United States.

Sikkim chief minister denounces ruler

From Michael Hornsby Delhi, Sept 2—The controversial Constitution (36th Amendment) Bill, which provides for Sikkim's "association" with the Indian Union, was today introduced in the Lower House of the Indian Parliament, by Mr Swaran Singh, the Minister for External Affairs.

What's a nice dress like you doing in a place like this?

The dictionary defines a museum as a "building used for storing and exhibition of objects illustrating antiquities, natural history, arts, etc." with the chilling rider that the term "museum piece" may be used in a derogatory sense about old-fashioned things.

Wreck the Government of Señora Isabel Perón

Interior Minister, recently stated that "it is still not time to impose a state of siege". However, extremists are indicating that there will be no let up in their campaign to topple Señora Perón's Government.

Argentina's left tires of right's supremacy

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Fashion

by Prudence Glynn

What's a nice dress like you doing in a place like this? The dictionary defines a museum as a "building used for storing and exhibition of objects illustrating antiquities, natural history, arts, etc." with the chilling rider that the term "museum piece" may be used in a derogatory sense about old-fashioned things.

In any museum, fashion has an obvious place. How should be displayed is less obvious; indeed it has to my mind defeated most of those who try it. Of course, from the historical and reference points of view exhibitions such as that at the costume museum at Bath, the Victoria and Albert Museum's Costume Court and Diana Vreeland's events at the Metropolitan Museum in New York are excellent, but then you could say the same thing for the cases of stone lumps and stuffed fish.

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Last Tuesday saw the opening of Browns shoe and accessory shop at 23 South Molton Street, London, W1. Exceptional shoes for men are bench made in England, as well as by Cerruti and Rossetti, and women have elegant ankle-strap shoes and straight-legged boots by Maud Frizon.

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All clothes shown are designed for Browns man's shop, 27 South Molton Street, from the firm's studio, and specially made for the new autumn collection.

Top: Harris tweed jacket, £38. Sizes 34in-44in chest and from a range of jackets and waistcoats. Gaberdene trousers pleated into the waistband, available in many colours, £25. Check Viyella shirt, from a selection, £15. Leather belt, chosen from many, £6.50. "Miner" scarf available in a marvellous range of colours, from cream to burgundy, and only £4.

Above: From a range, a knitted cardigan with toggle fastenings, £28 approx. Matching wool scarf, £10 approx. Straight-legged cord trousers with side pockets, £18. Available in dark green, cream, beige, R.A.F. blue.

Photographs by Peter Laver

able old master push people towards backing their own tastes? Will they go to student shows and buy pictures they actually like, rather than something with a name to swank about or something as an investment hedge against inflation? I wonder.

Wreck the Government of Señora Isabel Perón

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£7,000-£10,500 (Income Tax 15%)

ONE OF THE LARGEST GENERAL INSURANCE UNDERWRITERS IN THE FAR EAST

This vacancy is caused by expansion. We invite applications from candidates aged 28-35, who have gained at least three years experience at an Assistant Branch Manager level or higher, with involvement in organisation methods and systems design, in an active branch in a large insurance company, and will have also controlled four or more underwriters. Responsibility will be to deputy Chief Executive for supervising international underwriting activities and specific direction of Hongkong based underwriting team of skilled underwriters covering all classes non-life insurance and employing some hundred administrative and clerical personnel. While principal concern will be sound underwriting control, proportion of involvement will be in the introduction and development of streamlined operating procedures linked to a computer operation. Duties can be expected to involve some travel within the Pacific Area. A knowledge of FOC/AOA tariffs as well as fire orientation will be an advantage. Initial remuneration £7,000-£10,500 (Income Tax 15%), plus contributory pension, accommodation, free life assurance, educational allowance, and home leave passages. Applications in strict confidence under reference SUAE 3548/TT, to the Managing Director:

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This is a new vacancy caused by expansion in the U.K. and on the European Continent and is open to candidates aged 28-34 who will have acquired sound practical experience both in the corporate personnel function and also in the field in an organization utilizing modern personnel policies and practices, preferably in the oil or other process industries. Reporting will be to the Head of Corporate Personnel. Responsibilities will encompass conducting thorough project investigations in virtually every area of the personnel field, including personnel policies, organization planning, salary administration, fringe benefits, pension planning, appraisal systems and manpower planning and development as it relates to activities in the U.K. and European Continent. Up to 20% away travel will be necessary. Close liaison will be maintained at all times with top management. Candidates must have the ability to analyse thoroughly and the capacity for clear, logical expression both in written and oral communication. Initial salary negotiable £6,000-£8,000 plus contributory pension, free life assurance and assistance with removal expenses if necessary. Applications in strict confidence, under reference ERA3541/TT, to the Managing Director:

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STRATHCLYDE REGIONAL COUNCIL



DIRECTOR OF SOCIAL WORK

This advertisement appears with the approval of the Scottish Local Government Staff Commission.

Applications are invited for the post of Director of Social Work. The successful applicant will be responsible for providing the Council, its committees and the Chief Executive with professional advice on matters relating to the Social Work function and for ensuring that the Council's Social Work policies are effectively co-ordinated and implemented throughout the region. He will also be expected to contribute fully to the corporate activities of the management team of chief officials.

The Strathclyde Region has a population of more than 2 1/2 m people. It is centred round a densely populated industrial conurbation of over 300 sq. miles while on the other hand its peripheral areas are rural in character and are often sparsely populated. The Director of Social Work will, therefore, face the challenging task of developing an organization capable of dealing with a very wide range of Social Work problems.

The post is open to persons with the necessary qualifications and experience within the United Kingdom whether within or outwith the local government service. The salary scale will be fixed in accordance with the schemes of salaries agreed by the Joint Negotiating Committee for Chief Officials of Local Authorities (Scotland) and the National Joint Council for Local Authority's A.P.T. and C. Services (Scottish Council) as appropriate. It will however be of the order of £11,000/£12,000 per annum.

Applications, stating age, present post and present salary and giving details of relevant qualifications and experience, should be sent to the Chief Executive, Strathclyde Regional Council, City Chamberlain's Office, City Chambers, Glasgow G2 1DU. The closing date for applications is Friday, 20th September, 1974.

City Chambers, Glasgow.

LAWRENCE BOYLE
Chief Executive.

INTERNATIONAL WHALING COMMISSION

Established under the International Whaling Convention 1946, which provides for the proper conservation of the world's whale stocks, and thus the orderly development of the whaling industry—invites applications for the post of

Secretary

He will be responsible for the conduct of the Commission's business under the general authority of the Commission and the Chairman and in accordance with the terms of the Convention and its report and arranging all meetings of the Commission and its committees. He will maintain necessary contacts with all member governments and associated organizations and will arrange appropriate information and publicity services. He will be required to represent the Commission at national and international meetings. Considerable travelling will be involved from a base in London or elsewhere in the north of England. His increasing amount of his work will be scientific. He will help co-ordinate the research programmes of member nations and other organizations, and encourage studies and investigations in the light of the discussions of the Commission's Scientific Committee. He will assemble and assist in the assessment of scientific and statistical data and will edit reports for publication.

Candidates should have a good degree in a biological science and experience and proven ability in administration. Knowledge and practical practice in the operation, air-sea and retrieval of biological data would be an advantage, as would experience in fisheries and wild life research.

English is the official and working language of the Commission but a knowledge of other languages will be an advantage. The appointment will be reviewed after 2 years and the salary, which will be negotiable, will be within the range of £7,500-£9,000 per annum.

Applications containing full details of qualifications and experience and the names and addresses of 2 referees should be sent to:
MR. R. STACEY,
INTERNATIONAL WHALING COMMISSION,
ROOM 276,
GREAT WESTMINSTER HOUSE,
HORSEFERRY ROAD, LONDON SW1P 2AE,
TO ARRIVE NOT LATER THAN 31 OCTOBER, 1974.

ESSEX COUNTY COUNCIL

CHIEF EXECUTIVE AND CLERKS DEPARTMENT

Deputy County Prosecuting Solicitor

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Applications are invited from solicitors with extensive experience of advocacy and criminal law and particularly police prosecutions work. Some management experience is desirable.

The post is second to that of the County Prosecuting Solicitor leading a large team of Senior and Assistant Prosecuting Solicitors dealing with all types of crime on behalf of the Essex Police Authority involving frequent appearances in Magistrates Courts throughout Essex. A current driving licence is essential. Essential car user allowance payable and an assisted car purchase scheme is in operation. Lodging and disturbance allowances and assistance with removal expenses in approved cases.

Application forms and further particulars obtainable from County Personnel Officer, Essex County Council, County Hall, Chelmsford CM1 1LK, to be returned by 20 September 1974.

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Highly successful U.S. management consulting firm has requirements for mature professional to carry out and manage assignment in United Kingdom. 3-5 years experience in work measurement, time study, improvement, and work measurement and control with emphasis in direct labor manufacturing areas. Experience with BEFA, MTM or WORK FACTOR systems would be desirable. Excellent salary and expense allowance. For qualified candidates, please forward resume, salary requirement, availability and telephone number in confidence to:

MCS/Eur, c/o Isenhour,
21 Rue de la Falsanderie,
75016 Paris, France.

Opportunities for lending officers with international experience.

We would like to meet you if you are a lending officer with at least five years' experience.

Opportunities with the Bank of America—the world's leading international bank—include postings to offices throughout the world and the rewarding challenges of banking on a global scale.

Your salary will be determined by negotiation and will be commensurate with your ability and experience.

Please write giving details of age, experience and qualifications to the Personnel Officer, Bank of America, Europe, Middle East & Africa Division Headquarters, 7 Old Park Lane, London, W.1.

All replies will be treated in the strictest confidence.

THE OPEN UNIVERSITY REGIONAL DIRECTOR FOR SCOTLAND

Applications are invited for the post of Regional Director for the Open University in Scotland (designated as Scottish Director). The Scottish Director is the senior officer responsible for the Open University's activities in Scotland.

The person appointed will be concerned with the implementation in Scotland of all relevant aspects of the University's educational policies, including the recruitment and supervision of part-time students and the provision of full-time staff tuition and other services. Co-operation with universities and other institutions of higher, adult and further education, and with local education authorities, is a vital part of the job.

According to the successful applicant's qualifications and experience, the salary to be offered will be at an appropriate point on the University's senior pay scale, ranging from £3,707 to £5,707 per annum, plus a revised scale effective 1.10.74.

Applications should be made by letter, accompanied by a curriculum vitae, to the Personnel Manager, Open University, P.O. Box 12, Milton Keynes MK7 2AL, from whom further particulars are available. Closing date for applications: Friday, 27th September, 1974.

OFFICE ADMINISTRATION CONTROLLER

Life Assurance

c £4,500 + benefits

A rare opportunity arises to join a new life assurance company shortly to commence business. Backed by interests whose combined assets exceed £2,000m, the company will market an extensive range of periodic and single premium unit-linked plans.

The administrative offices will be in the South Herts/North London area and duties will cover a wide range of functions and activities, such as goods and services purchasing, acquisition and maintenance of premises and supply of printing and stationery.

Accordingly it is essential that the applicant has had at least five years' experience of commercial purchasing, a similar period in the management of premises and all aspects of printing and stationery, and exposure to staff management at a senior level.

It is likely that the man we seek will be at least 35 and preferably have some additional knowledge of, or experience in, personnel management, communications systems, typing services and file record maintenance.

We offer a salary in the region of £4,500, a range of benefits plus a challenging opportunity to create and develop your own career.

Write to Mr G. Slipper, AGRC Holdings Limited, 31 Old Burlington Street, London W1X 1LB.

LEGAL NOTICES

In the High Court of Justice (Chancery) Division, —**COMPANY ACT 1948**—**IN LIQUIDATION**—**NOTICE** is hereby given that the above-named company has been wound up and that the Liquidator, **HERBERT PETER LALAN F.C.A.**, of 10 Colindale Avenue, London NW9 1DQ, is in receipt of the assets of the company and is in a position to distribute the same to the creditors of the company. Any creditor who has a claim against the company should send a statement of his claim to the Liquidator at the above address, together with any supporting documents, not later than 4 o'clock on the 4th day of October 1974.

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Liquidator.

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NATIONAL UNION OF TEACHERS DEPUTY GENERAL SECRETARY

Applications are invited for the post of Deputy General Secretary of the National Union of Teachers. The person appointed will be concerned primarily with deputing for the General Secretary of the Union over the whole range of its functions and duties as the Union's chief official. The Deputy General Secretary will have special responsibility in the educational field and will be expected to undertake such other duties as will be assigned to him/her from time to time. Applicants should have recent teaching experience in maintained schools and a thorough knowledge of the education system and of Union policy.

The salary attaching to the post is £5,429-5 x £252-£6,689 per annum plus London Allowance of £144. The successful candidate will be assisted with the expenses of removal and of obtaining housing accommodation within a reasonable distance from Hamilton House.

The person appointed will be required to commence duties on 1st January 1975 or earlier if possible.

Conditions of Appointment and of Service can be obtained from Hamilton House.

Applicants, giving experience and qualifications, together with names of two referees (who should not be serving members of the Union's Executive), should reach the General Secretary, National Union of Teachers, Hamilton House, Station Place, London WC1H 8BB, not later than 18th September, 1974.

SALOP COUNTY COUNCIL COUNTY SUPPLIES OFFICER

£5,500-£6,000 (Under review)

Applications are invited for this newly created post with the County Council.

Particulars and application forms may be obtained from the undersigned (Telephone No. Shrewsbury 52211 Extension 471).

Closing date for applications 30th September, 1974.

W. N. P. Jones,
Chief Executive,
The Shirehall,
Abbey Foregate,
Shrewsbury.

8th August, 1974.

Industrial Relations—Finance

Midland Bank wish to appoint an experienced personnel man to join its Head Office Personnel Relations team which is responsible for negotiating with the recognised unions over the full range of personnel activities, including job evaluation. The job requires the ability to analyse current practice and to assist in the formulation and development of forward looking policies. Candidates should be aged not less than 35 with about 10 years' relevant experience with predominantly white collar organisations and qualified members of the Institute of Personnel Management.

The essential personal qualities are enthusiasm, a capacity for sustained hard work and willingness to work as a member of a team.

Starting salary not less than £6,000 with the usual conditions of service in the Bank, including non-contributory pension scheme.

Please apply in strict confidence quoting reference number 1597 to Clive and Stokes, 14 Bolton Street, London W1Y 8JL.

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Appointments & Personnel Consultants

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Applications are invited for the post of

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for Executive and Administrative Duties. Male or Female, aged 30 to 50; £3,306 to £4,895, according to qualifications and experience.

For more information write to the Registrar at 2 Carlton House Terrace, London SW1Y 5AF.

PUBLIC NOTICES

H.M. LAND REGISTRY
LOSING CERTIFICATE TO ISSUE new Certificates in place of those described below that are stated by the owners to have been lost or destroyed. Notice is given that the following certificates of title or other documents are being cancelled and replaced by the appropriate District Land Registry at the address shown below:

THE CROYDON DISTRICT LAND REGISTRY
Sunley House, Croydon, CR9 3LE

(1) Leasehold Title No. 132508 and S.E.13. Certificate to issue to Mrs. James & Charles Dodd, 77 Lewisham High Street, London, S.E.13.5UN.

(2) Leasehold Title No. 132509 and S.E.13.5UN. Certificate to issue to Mrs. Simon Charles Dodds, 77 Lewisham High Street, London, S.E.13.5UN.

TREDDOCK DISTRICT LAND REGISTRY
Chick Land Registry.

BETTING GAMING & LOTTERIES
JONES of 15 The Green Chichester, Hampshire, has applied to the High Court for an order that the Betting and Lotteries Act 1968 should apply to the premises at 15 The Green, Chichester, Hampshire, and that the premises should be licensed for the purposes of the Betting and Lotteries Act 1968.

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Personnel Manager

CHASE MANHATTAN BANK N.A. LONDON

This multinational bank needs a Personnel Manager for its London branches.

The successful applicant will be a self-starter in his late twenties or early thirties with developed skills in most areas of personnel administration and proven ability in running his own department. Once appointed he will be offered every opportunity to expand his knowledge and experience, with particular emphasis on job evaluation, salary administration, appraisal schemes, fringe benefit areas including pensions and insurance, training in man management and staff communications generally.

Previous experience in both banking and working with an American company would be an advantage.

Salary negotiable around £6,000. Benefits include assisted mortgage, non contributory pension.

Please reply with curriculum vitae to

MR. D. STEELE
Woolgate House,
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Solicitor for Commercial Litigation

Coward Chance have an opening for a solicitor in their Litigation Department. The work will involve a broad field of commercial litigation cases, frequently with international implications.

Applicants should have good degrees and other qualifications to demonstrate their ability. Recently qualified applicants will be considered. A good salary will be paid according to the ability and experience of the person selected.

Please apply, giving full details of your education and career to:

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Coward Chance,
Roxey House, Aldermanbury Square,
London EC2V 7LD

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Engineering Consultants to the Oil Industry

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We require Mechanical, Electrical, Civil, Instrumentation and Pipeline Engineers, Inspectors and Design Draftsmen for design and inspection of pipelines and oilfield installations in Iran.

Generous salary and leave.

Please send résumé (tel. No. if poss.)

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concerning the law.

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In the HIGH COURT OF JUSTICE
Chancery Division Companies Court

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A perfectly maintained detached
four-bedroom house with
detached garage and swimming
pool.

LEGAL NOTICES
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In the HIGH COURT OF JUSTICE
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PERIOD CHARACTER
GEM
A perfectly maintained detached
four-bedroom house with
detached garage and swimming
pool.

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No 002006 of 1974.
In the HIGH COURT OF JUSTICE
Chancery Division Companies Court

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Advice has been received from
Tokyo that the 72nd Ordinary
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This week at Sotheby's
Tomorrow, Wednesday, 4th September, at 11 a.m., at Belgravia
English Furniture, Works of Art, European Bronzes and Clocks, 1830-1930

Bonham's
Founded 1793
Sales at the Mountpelier Galleries
Mountpelier Street, Knightsbridge, London SW7 1HD. Tel: 01-584 9161

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Fine Art Auctioneers and Valuers
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PORCELAIN, OJETS D'ART AND CARPETS
Wednesday, September 3rd & 17th at 1.30 p.m.

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SURREY HILLS
EWHURST
Tudor style family house, 6 bedrooms, 4 bathrooms, 13 on site, 1/2 acre, 18' on a hill.

COUNTRY PROPERTIES
A FAR CRY FROM CRISIS
205,000 buys one of the most beautiful houses in the country.

COUNTRY PROPERTIES
EAST LINCOLNSHIRE
Coastal ultra-modern detached four-bedroom house to architect's specification.

COUNTRY PROPERTIES
SURREY HILLS
EWHURST
Tudor style family house, 6 bedrooms, 4 bathrooms, 13 on site, 1/2 acre, 18' on a hill.

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The Largest firm of art auctioneers in the world
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Green Anne walnut leg table, George I gilt gesso oval mirror, a Renaissance style gilt copper table clock.

PARSONS, WELCH & COWELL
129 High Street, Sevenoaks
Good English and Continental Furniture, Clocks, French Animalier Bronzes by Mene, Moizgic and others, Russian Works of Art (from the Estate of the late Mr G. D. Talbot).

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Rippon Boswell & Company, the specialist auctioneers of rare Oriental rugs, give notice of their forthcoming sale in London on 21st September 1974.

LONDON FLATS
WIMBLEDON PARKSIDE SW19
Luxury 2 bedroomed Georgian Apartment: bathroom, vanity room, superb modern kitchen, very large reception facilities.

LONDON FLATS
MORTLAKE
Purpose built 4/4 floor flat, 3 rooms, c.h. & b. c. 1970. Refurbished. £10,750. 99 years lease.

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Purpose built 4/4 floor flat, 3 rooms, c.h. & b. c. 1970. Refurbished. £10,750. 99 years lease.

Harrods Estate Offices
AUCTION GALLERIES
Arundel Terrace, S.W.15. Tel: 01-748 2739
The 4th, 5th and 6th of September
Wednesday, 10 a.m. Antique and other furniture including a mahogany breakfast secretaire bookcase, a Boule card-table, a mahogany desk, bureaux, a set of Carthusian chairs, dining tables, lounge suites, chests of drawers, occasional tables, etc.

PHILLIPS
Today, Tue., Sept. 3, 11 a.m.
Good English, Continental Furniture, Works of Art, Scientific Instruments at 12.15 p.m.
Chinese & SE Asian Ceramics, Furniture, Works of Art, Scientific Instruments, etc.

PHILLIPS
Today, Tue., Sept. 3, 11 a.m.
Good English, Continental Furniture, Works of Art, Scientific Instruments at 12.15 p.m.
Chinese & SE Asian Ceramics, Furniture, Works of Art, Scientific Instruments, etc.

PROPERTY ABROAD
A SWISS INVESTMENT—More than 1000 square metres of office, Buckinghamshire area. £250,000. 99 years lease. £250,000. 99 years lease.

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THE MINISTRY OF ELECTRICITY AND WATER FOR THE UNITED ARAB EMIRATES INVITES TENDERS FOR THE FOLLOWING WORKS
TENDER NO E/3/74
Covering complete turnkey power station extension at Dhad, 2000kw diesel generator, including supply, erection and commissioning of two 2000kw diesel generators and associated auxiliaries and civil works.

James Reston talks to the French President about learning to live in a changing world

M. Giscard dreams of a peaceful revolution in Europe

The new French President, M Valéry Giscard d'Estaing, describes himself as an optimist. He thinks the world is a little mixed up these days, but believes its problems are manageable, its people tough and adaptable, and its future not too bleak.

In a private interview here the other day, he sat on a green velvet couch in the Elysee Palace and spoke with measured confidence about the mingling of age, as if our contemporary perplexities were sort of a passing nuisance which could be handled, if not solved, once the people learnt to live with perpetual change and reform.

He supported the concept of a united Europe, but vaguely, but mainly he talked about France, with the utmost pride, as a model for the future, and of the role of women, youth, and leadership in bringing about the age of reform.

He began by criticising the present economic and financial condition of the world. General de Gaulle had been condemned for trying to create trouble, he said, but now it was obvious he was right in believing that the world simply could not absorb more than \$100 billion of American deficits.

Since that time, President Giscard continued, the world had done away with the international monetary system and now had just a moving situation, a floating world. Maybe, he said, it might be technically better, but psychologically and politically it was very unsettling. People did not know where they were or where they were going, and this could be cured only by the establishment of a new international monetary system.

While on this subject, he said that during these past four or five years of widespread inflation, people of all classes had got into the habit of desiring a constantly higher standard of living, without any consideration of where the money was coming from. He hoped this attitude was now approaching its end.

President Giscard placed considerable emphasis on the importance of equality between France and West Germany in economic and industrial power. It was for this reason, he said, that he had insisted on a faster rate of growth for France since it had been lagging behind West Germany.

The problem of political leadership, he said, was to help people adjust to a

permanent state of change. France was a very conservative country, he observed, and the people did not like change. They were torn between two attitudes: an intellectual desire for change and a fear of change.

In the past, he explained, France had some long periods without much change until things became intolerable, and then there were upheavals of various types: revolutions in the nineteenth century, and serious political crises in the twentieth century such as the Front Populaire in 1936, the fall of the Fourth Republic in 1958.

His intent, he said, was to try to have a steady, reformist policy, a continuous change, a moving change all the time, with a speed that could be increased or decreased according to the needs of the situation.

It was a mistake, President Giscard said, to be afraid of the fight against change. For example, a large majority of the French people were against his law on abortion and contraception, but once the policy had been decided, the people accepted it quite naturally.

President Giscard has been in office now for a little more than 100 days. He was asked what he hoped to achieve as a result of his spectacular victory. Two things, he said: To create a feeling that France is again a little ahead of her time, politically and socially, and second, to be a member of some European community.

He was pressed to define his concept of a European community. He replied that he had always believed it was rather futile to discuss concepts. We are not living in a world of constitutions now, but in a world of events.

The question of federation or confederation did not seem to him to be the key to the problem, though perhaps what he envisaged was what might be called a confederation. As soon as governments were really working closely together, really, really, really, the question of structure, he said, was not an important one.

Still, he insisted that he meant to move toward common action in western Europe; he meant it absolutely and had talked to West German Chancellor Herr Helmut Schmidt about creating an attitude, so that Europe will be perceived as a whole by Europeans and by others.

He was asked how it was possible to reconcile all the different political and

economic problems in each country with common international policies. How to reconcile all this diversity with European unity?

He replied that he did not think it was all that difficult. Nations had the right to diversity. He must not try to force them into a single mould. There were differences of language, behaviour, education and standards of living. The main thing to know was whether people, despite their national differences, thought of themselves as belonging to the same unity.

It was a question of leadership, he insisted. If the leaders were forceful enough, and imaginative enough and brought a certain lyricism to the task of leadership, the people would begin to think in a more unified way.

What President Giscard seemed to be aiming at was a peaceful revolution, a policy of perpetual change at home and a loose confederation in western Europe. His cabinet is now at work drafting a new progressive constitution. It is appealing particularly to women and to youth to break up the old groupings of French politics.

Take the women's situation in France, he said. They now have limited possibilities of choice for contraception for their own opportunities in business. He was very serious about the problems of women. The cultural change of our time, he emphasized, will probably come through the women. The new organization of society will probably come more quickly through women's eyes.

On relations with the United States, President Giscard stressed the importance of consultation, but showed little enthusiasm for ceremonial summit meetings among leaders or for formal institutions of a transatlantic relations.

The best technique was direct consultation between leaders, he said. In fact, there was now very good consultation between French and American leaders, he said, but he was cautious about discussing associations. The world should be seen as a sphere with large spots on it, he said. There was the American spot, the European spot, the Soviet spot, the Chinese spot, and so on. You could not have the same spot for Europe and the United States. Their natures were different, their problems of defence were different, so transatlantic relations, but they could not be related in the sense of a common structure of decision.

Of course, he added, Europe and America belonged to the same political philosophy, the same economic way of life, and this created a lot of similarities, but this did not mean association against some other part of the world.

He agreed that there were common problems of population, food, oil and other raw materials and no doubt these required common thinking. Except for a few nations, colonialism and borders were no longer problems. These other questions were the real problems, but unfortunately

they were not always seen in the same way. The United States, he observed, believed in a free market without too many rules. The Germans had much the same approach. But the French, the British and the Dutch had by tradition another economy for raw materials, and for population and other major problems.

Accordingly, he thought there was now a need for a very deep and complete discussion of all this, but it was important to avoid having it in a rigid international forum, where officials tend to manoeuvre against one another and fail to reach any true analysis.

Looking ahead to the longer future, M Giscard foresaw a very different world which, he would be comparatively thinking for something different in his thinking and his political actions. He did not foresee major conflicts between the nuclear states during the remainder of this century, but there would be authoritarian regimes in large parts of the world, and probably considerable tension and localized conflicts as a result of these oppressive régimes.

Continents that were forgotten for 2,000 years would be very active, he thought. Relations between the major powers, including China, would be comparatively quiet. We have been thinking in the past mainly about relations among the prominent nations of the present age, he said, hoping to keep things quiet, but that would not be enough for the future.

He referred to the French philosopher, Teilhard de Chardin, who was born 150 kilometres from M Giscard's chateau at Chamonix. He recalled that de Chardin had said that the real question was not what you are looking at but where you are looking from. In the past we have been looking at the world from only one point of view, with everything coming only from the future, President Giscard said. There will be many more lights, coming from many different places: from Brazil, from South-East Asia, maybe from Malaysia, the Philippines, or Indonesia. So we would see things in a different way, in a different light.

He was an optimist about this coming world, he said. The history of mankind was a history of progress, so optimism was in order. Copyright New York Times, 1974



President Giscard d'Estaing: Optimistic view of the future.

Aftermath of Watergate sees the Democrats in disarray

Mr Ford on a winning ticket for 1976?

There is considerable argument in the United States whether the "system" worked over the Watergate case, whether the fact that Mr Nixon was exposed and removed is a better advertisement for the success of the American constitution than the fact that he (and Mr Agnew) were elected in the first place is a proof of its failure. There is, however, one direct consequence of the way the constitutional process works which is peculiarly American and a triumphant success.

The Watergate scandal, so far as it affects the Presidency, was brought to an abrupt end by Mr Nixon's resignation, and his successor is completely free of its ill effects. In any other country, much of the scandal would have struck to the President's political party and its chances at future elections would be exceedingly grim. Nothing of the sort has happened in America.

Mr Ford's position is politically invulnerable. Every public appearance he makes strengthens it, with people still congratulating themselves that he is not Richard Nixon, that he tells the truth and has no enemies. Things will have to go very wrong indeed with the economy to top him being elected in 1976.

This is all very hard on the Democrats. Ideally, they would have liked Mr Nixon to drag on in office until the end, or near it, poisoning the Republican Party beyond salvation and ruining the chances of the Republican Party at the Presidential elections.

When it became necessary, instead, to impeach Mr Nixon, they had the quite reasonable hope that the matter could be brought to a satisfactory climax near the congressional elections this November, so that enough Democrats would be elected to give them a "veto-proof" congress. One in which liberal Democrats had a sufficient majority in both houses to override the opposition of their Conservative colleagues of both parties and the president's vetoes on their legislative programme.

It was a tempting dream, though rather unrealistic, anything so complicated as a legislative programme before, and

the last time one party had an overwhelming majority, in Congress elected in 1936, nothing of note was achieved.

With the election of Mr Nixon to resign too early for the Democrats. Being patriotic people, they do not actually regret Mr Nixon's departure. They share the general relief and are delighted to be able to take a summer holiday like ordinary mortals.

They have now, however, to face the likelihood that their gains this November will be much less than they had hoped and that Mr Ford will remain President until 1980. Politically, in fact, things are rather bleak for the Democrats.

With the acute sense of timing for which they are renowned, the Democrats chose the weekend before Mr Nixon's last crisis to stage a very public and very bitter fight between liberals and regulars. They were holding a conference in Kansas City, where they met to discuss a mid-term convention this December, and the dispute was on the terms of the party's charter which is to be approved by the convention.

The liberals, blacks, and militant women, who marched to victory in Miami in 1972, with the bemused Senator McGovern as their front man, continued to wave their banners and shout their slogans, but this time were outgeneralled and were driven from the field by the old guard.

These were the people and groups which have run the Democratic Party for decades. They were defeated in 1972 and are determined to win control of the party before the next election. Mr McGovern's mid-term cherished charter, and the radicals therefore stormed out of the congress, denouncing their rivals in terms of great bitterness and delighting the Republicans.

The road is certain to continue to be a rough one, and the possibility, if defeated, may bolt the party cannot be ruled out. It is no wonder that the Republicans have been heard singing in the streets. All Republican congressmen went down to the White House the other day, to be photographed, beaming, with the President. The pictures will be

used in their campaigns this autumn. As one official put it, a month ago, we would have had to drag them from the highways to get them into the White House."

And no Republican in his right mind would have published a photograph of himself with President Nixon.

All is not won, of course. The Republicans still expect to lose a couple of Senate seats and a few House seats. Many potential candidates refused to get involved this year, fearing inevitable defeat.

No convincing candidate was found to run for the governorship of California, where Ronald Reagan is stepping down, and the Democrats are therefore likely to win, more or less by default.

The Democratic Governor of Texas faces an easy re-election because the State's strongest Republicans decided to stay out of the fight this year. In many districts, the party had great difficulty in finding candidates to replace Republican congressmen who are stepping down this year, while the Democrats had an abundance of able candidates. The results will therefore probably show Democratic gains.

Furthermore, euphoria in Washington is not necessarily shared down among the grassroots. As survey of voter opinion in Michigan, in a district won from the Republicans by the Democrats in a by-election earlier this year, suggests that Watergate is still harming the Republicans' chances of winning back the seat.

The general disapproval of every politician in Washington which was one of the features of American political life during the scandal, seems to be diminishing but it may turn out that the Democrats will be re-admitted to public favour more quickly than the Republicans—unless, of course, the Democratic Party tears itself apart.

The President has got two years to turn the economy around. If he succeeds, or is thought to be succeeding, then he will be unbeatable. Governor Reagan, who decided to give up the Governorship of California the better to prepare his attack on the Presidency, is sniping at Mr Ford from the right, but the President shows no signs, yet, of being worried about protecting his right flank. Mr Rockefeller, who resigned the Governorship of New York to prepare his own last attack on the White House, has been given the consolation prize of the Vice-Presidency.

It would be a very strong ticket in 1976. Mr Ford will be expected to carry Michigan and Mr Rockefeller to carry New York, two of the big states a President has to win to get elected. The ticket has the sort of balance party managers love, a conservative and a liberal, an easterly and a mid-westerner, an expert on Congress and an expert on state government (and much else).

Some Democrats hope that Senator Edward Kennedy can be forced to run in 1976, will be soundly defeated, and thus eliminated from party calculations in 1980. Alternatively, if he sits this one out, his authority in the party might suffer.

The message of all this is that American political life has resumed its normal course, after the horrors of the past few years. We are still living under the shadow of Watergate: memories are still vivid (that is why everybody is so happy) and the immediate consequences of which arise are still being worked through.

Patrick Brogan

Lord Chalfont

Defence: Balancing security and savings

The basic assumption of current British defence policy, endorsed by all three political parties, is that the British contribution to Nato, especially in the European-Atlantic area, is crucial to national security in the broadest sense, and that it should be reduced only as a last resort. Once this premise is accepted the scope for economy in the defence budget is limited from the outset, since expenditure outside the Nato area has already been drastically reduced.

For example, while European Theatre Ground Forces account for about £500m. of the defence estimates, army combat forces in the rest of the world cost only £63m. The search for savings, however, begins with the Gibraltar and Falkland Islands and goes on from there. In other words, every military commitment outside the European-Atlantic area must now be regarded as potentially dispensable.

The Hong Kong garrison is the most expensive of these imperial legacies. It costs between £30m and £40m a year, but so far as a possible attack from the Chinese mainland is concerned, it is no more than a token force. Its five infantry battalions, with an artillery regiment and an armoured car squadron are not expected to repel the might of the People's Liberation Army. They are, however, expected to guard against any threat to the internal security of the island, and there is no real scope for any reduction in their strength. The only other military presence in the Far East, apart from a Gurkha battalion in Brunei, is the British contribution, based mainly in Singapore, to the Five Power Defence arrangements at the ANZUK Force. This is little more than a token force, and is expected to be withdrawn, at an estimated saving of £15m to £20m a year.

In the Mediterranean the principal areas of concern are Malta and Cyprus. The present agreement with the Government of Malta expires in 1979, after which British Forces will presumably leave the island. However, as our Nato allies

already contribute about two-thirds of the cost of the military presence there, the saving is unlikely to be more than about £5m a year at current prices. In Cyprus the situation is at present complicated by the crisis in the Eastern Mediterranean, which provides an important lesson for the future of British defence policy. The familiar phenomenon inelegantly known as the "suck-in" effect, requires small garrisons to be strengthened in times of trouble because they are usually inadequate to deal with any serious crisis. The recent events in Cyprus have reinforced the already powerful arguments for the abandonment of the sovereign base areas at Dhekelia and Akrotiri which would cost a further £30m to £40m a year.

That, however, is as far as the economies outside Europe can go. The other garrisons and military forces—based on Gibraltar, the Falkland Islands and British Honduras—are unlikely to be dispensed with as long as the territorial disputes with Spain, Argentina and Guatemala remain unresolved. In any case the savings to be gained by leaving would be inconsiderable. So the virtual liquidation of Britain's remaining global responsibilities would produce, at most, savings of £55m a year by the 1980s—still a long way from the target.

A solution to the Northern Ireland problem would help matters, of course, although it is important to bear in mind that a third of the troops on duty there are temporarily detached from the British Army of the Rhine. The withdrawal from the Far East and the Mediterranean will obviously allow reductions in the Royal Navy's amphibious support forces, in the transport aircraft of the Royal Air Force Support Command and in strategic posts such as Masirah and Gan. (In circumstances which required the rapid reinforcement of the European theatre, aircraft of civil airlines would be used.) All these together, however, would still not produce the kind of money the Government is pledged to save.

If there should be an early breakthrough in the negotiations with the Soviet Union on Mutual and Balanced Force Reductions in Europe, it might eventually be possible to withdraw a part of the British Army of the Rhine without damaging the defence arrangements of the Western Alliance. Few close observers of the international scene, however, would bet much on the chances of this. The inescapable conclusion is that if the Government is to cut the defence budget by several hundred million pounds, there will have to be further substantial reductions in the strength of the Royal Navy, the Royal Air Force and that part of the Army based in the United Kingdom.

The Royal Navy's contribution to the fleet of the Supreme Allied Commander, Atlantic, will have to be reduced, as will the front line strength of the Royal Air Force general purpose combat forces. To cut the Territorial Army and Volunteer Reserve would affect the essential capacity to reinforce the British Army of the Rhine in a crisis in Europe. Equally, therefore, the unpalatable truth has to be faced—there will have to be a further substantial reduction in the size of the Regular Army as the overseas garrisons are abandoned and the United Kingdom garrison is reduced. Any attempt to reduce the number of troops available at home is bound to have considerable implications, especially in the light of the current controversy about a possible breakdown of law and order.

It is worth making the point at this stage that drastic cuts in the defence establishment will not have an exclusively beneficial effect upon the economy; some of the consequences might be rather exacting. The situation. There will be fewer jobs—especially in the military aircraft and shipbuilding industries; and there will have to be cuts in the 300,000 civilian jobs directly employed by the armed forces.

The classic argument of the "massive disarmers" is that there is no problem in redeploying men and women from defence industries to other employment; and that one of the reasons for Britain's poor economic performance over recent years has been an over-emphasis on "non-productive" defence effort.

The counter-argument is that we are almost certainly moving into a period of high unemployment; and that in recent years the percentage of gross national product spent on defence has been cut by half—without any noticeable effect on our economic performance. There will still have to be the left of the Labour Party, who talk in terms of cutting the defence budget by a third. As the outlines of the defence review begin to emerge it is evident that the Government realizes that this is unrealistic. Yet it must be recognized that even to achieve a much more modest target involves the kind of gamble which has more than once before led Britain to the edge of disaster. In his book *Britain and Her Army*, Correlli Barnett wrote: *In their history, the British solved the problem of reconciling military power with a civilian government (and a civilian society) with remarkable success, fundamentally because of their immunity from invasion behind seas commanded by the Royal Navy. On the other hand, the British at times ran close to catastrophe in their neglect and suspicion of soldiers.*

The British mistrust of standing armies has a long and complicated political history. One of the principal responsibilities of a democratic government, however, is to preserve, in times of apparent security and stability, even at the risk of unpopularity among its own supporters, the protective arrangements which the people will justifiably expect in times of crisis and danger. It is by the standards that any new defence policy must be judged.

The author of the article on Cyprus which appeared on this page yesterday was Nicos Deletoglou.

Driving to Brighton through the rain yesterday morning, I reflected that to me the opening day of the TUC conference was really to arrive too late. It seems that I've been reading about it for days already, about the battle of the social contract, about competing the resolutions, about Jack Jones, Len Murray, Hugh Scanlon, Michael Foot, and the annual cricket match between trade unionists and industrial correspondents.

Not only the battle lines already drawn, but in many cases the battles are all but over and the conference proper could be an anti-climax. In this company, I can hardly offer an excuse for my later arrival that I had to stay in London for the opening of the oyster season. I have never been to a TUC conference before, and as I arrived at Brighton's Dome, my first impression was of neighbourliness and goodwill. There was something of a scrum at the entrance, where stewards were cordially escorting from the main body of the building some vociferous demonstrators calling loudly for a fair wage for pensioners—the cry of those who rallied there on Brighton's wind and rain on Sunday. With an entire absence of rancour, the steward was directing them to a strategic point at the entrance, where they could make their point and, it seemed, cause most

Ernest Lorenz of the National Union of Insurance Workers took up the theme with relish, as he proposed the vote of thanks to Lord Allen. He attacked the press for giving publicity to what he called "superannuated Fascists" who boasted about forming private armies of strike breakers. He likened the atmosphere they created to that in which "a little corporal with a funny moustache" rose to power in Germany.

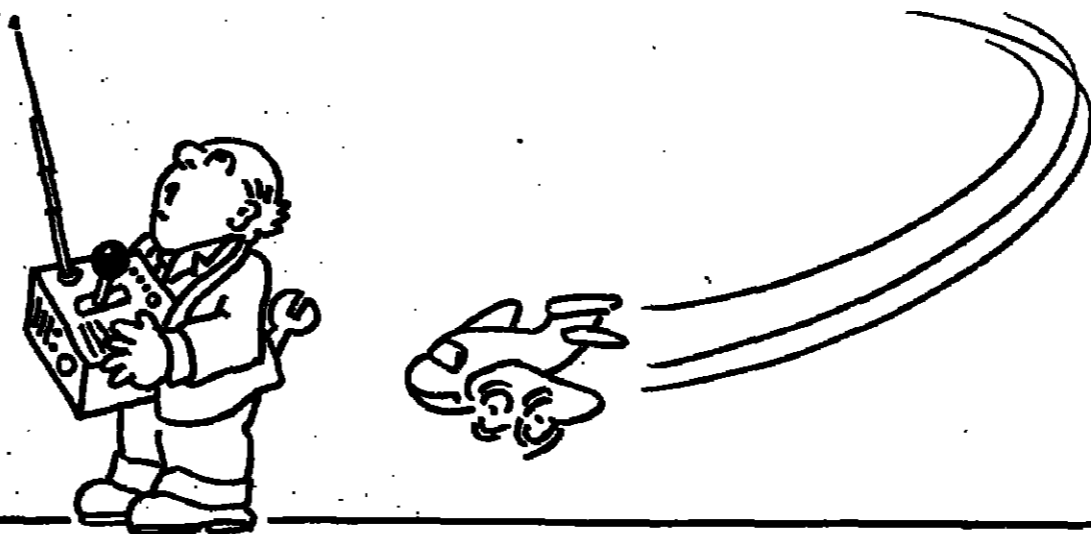
The press, he continued, should devote its energies to encouraging these old soldiers in the words of the song, to fade away. "They should show a little of the sense of responsibility they are so fond of calling for from other people."

All that was nothing, I was told, compared with what had gone on at the Tribune meeting on Sunday night, when Michael Foot, Jones, Richard Clements and all had rounded on the press still more ferociously, one speaker denouncing us as "the forces of evil."

"Watch out," said a colleague, "for the two-way vote syndrome." Some unions were expected to vote in favour of the social contract in the composite motions on the subject, but against it or in favour of it on another motion. Certainly I shall watch out for it, but I give no guarantee I shall spot it.

There does not seem much gossip here of the conventional kind, though perhaps some might emerge when the speaker gets seriously into his stride. The best I've been offered so far is a suggestion that I ask Jack Jones why he is not staying at one of the largest hotels. The speculation is that it is because he does not feel the hotel is properly unionized. I shall ask him if I get the chance.

The Covent Garden Neighbourhood Festival, which has been organized this year to mark the departure of the market from the area, got off to a wet and windy start yesterday. At the social centre, where the programme announced for one o'clock performers were still unloading props from a little Renault. A notice at the door said that because of rain the play would begin at 1.15. Inside a notice pinned to the door of the room in which the performance was to be given postponed it further to 1.30.



Aerospace electronics

Freedom from government control means lively competition

Huge potential for world sales

by Arthur Reed
Air Correspondent

The United Kingdom aerospace electronics (avionics) industry goes to this year's Farnborough Show in a buoyant mood in spite of the inevitable deleterious effects upon it—as upon the rest of British aerospace—of the world energy crisis.

Avionics are probably better able to resist such pressures because their products are forming an increasingly large percentage of aerospace needs as the years pass by. At the moment they constitute about one-third of the cost of any new aircraft, but this proportion will inevitably increase as the reliance of the aviation industry upon avionics becomes greater, and the products themselves become more and more complex.

This increasing content in aircraft, whether civil or military, and in their attendant ground facilities, from air traffic control to instrument landing systems, means that the avionics industry has been able to occupy a more important place in the counsels with government which lead up to new projects and a better say in the way in which those projects are managed.

Until recently the industry found itself with little say. It was frequently presented with a fait accompli by the civil servants who drew up guidelines for new projects with little or no recourse to the thinking and capabilities of the individual companies which make up the avionics sector of British aerospace.

Today relations with the various government depart-

ments involved in this field have vastly improved. Numerous joint government-industry committees and working parties have been established so that the industry now finds itself in at the birth of the majority of new ventures, and able to shape them for the good both of itself and of the nation.

There remain, however, some sections of the industry which believe that this collaboration could go further still. A criticism throughout industry is that a far larger proportion of the government-sponsored research and development funds for avionics should be channelled to the industry's own laboratories rather than to those of government establishments, such as RAE, Farnborough.

Although it does rely on public funds for a great deal of its research and development, avionics in the United Kingdom still finances much of its own work in this sector as private ventures. It is a form of funding now almost unknown in the expensive airframe and engine sectors of British aerospace, and this ability to be completely commercial and free to a major degree from government control makes inevitably for a very lively and competitive industry.

Firms within the Electronic Engineering Association do, in fact, compete among themselves on similar projects, but at the same time they often collaborate on other projects and subcontract work to each other. This bullish atmosphere has been affected to a significant degree by world forces over the past 12 months, in particular galloping inflation and the effect on airlines and military aircraft operators of the energy crisis brought about by the October war between the Arabs and the Israelis.

A further aggravation was the series of industrial disputes which affected the whole country early this year and which made its impact on avionics at a time when their order books were highly satisfactory. A shortage of components and materials at that time had a disappointing effect on output and turnover.

Perhaps the most damaging result of these events in early 1974 was on the reputation of the British industry in its overseas markets. Although it is apparently recovering, it will not be possible to judge the full effect until the end of the year—although the gathering at the Farnborough Show of senior executives from companies from abroad who are traditional customers should provide an excellent sounding board.

The avionics industry is bracing itself to meet the challenge at Farnborough of the full competitive effort of the United States industry, which is being allowed in for the first time under a change of the rules by the Society of British Aerospace Companies.

There are indications that the American industry is taking Farnborough very seriously, with more than 120 different products listed for display, many of them in the electronics field.

Executives of the British industry react, however, by pointing out that the United States participation will allow them to see at close quarters and all under one roof just what the main opposition is doing. They point out that, even though the British industry does not have the complete capability of their transatlantic competitors, particularly in the space and rockery sector, they have sold a wide range of their products into America and are a force to be reckoned with there.

Meanwhile, the British industry believes itself to be well established to sell its many successful wares developed in the past, while being embarked on numerous very promising projects for the future—among them improvements to instrument landing systems to make them less subject to interference from buildings and local traffic, microwave mobile instrument landing systems for both civil and military uses, data links to join up highly developed airborne electronic systems with highly developed electronic systems on the ground and aeronautical satellites.

This latter project has become a temporary victim of the energy crisis. The airlines, through their trade body, the International Air Transport Association (IATA), were never in favour of the system, which was to provide navigational and communications systems for the whole industry via at least two satellites placed in orbit, one over the Pacific and one over the Atlantic.

The airlines contend that the slowing down of their traffic, brought about by higher prices for aviation fuel and the resultant need for higher fares, the carriage of more people in fewer, larger airliners and the rapid development of on-board navigation systems, have conspired to make aero-satellites unnecessary at present. Communications, they add, can still be carried successfully on the traditional high frequency radio bands.

Despite these objections, the European Space Research Organization (Esro) has the funds, and is going ahead with its plan. Further busy markets for their products are foreseen by the industry in the oil exploration industry, with a growing need for communications and navigation equipment for helicopters, in equipping the new generations of wide-bodied airliners and super-jets and their attendant ground facilities, and in updating existing and Third World airports to the demanding standards of the United Nations aviation body, the International Civil Aviation Organization (ICAO).

Whether partnership with the EEC countries will help or hinder British avionics business is not yet clear. According to the latest report of the Electronics Engineering Association, the first year—1973—in the Community had little direct effect on business although there were longer-term signs that the policies of the Community in such things

as public purchasing might have a more significant effect. Industry leaders are pessimistic about the future possibility of a European avionics industry. A political forcing together has been tried and has been seen to fail—as it has in the airframe and engine sectors of aerospace, but the executives do not rule out closer integration if it comes on purely commercial lines.

Memories of British companies emerging second best in competition for avionics contracts for the European multiple combat aircraft (the MRCA) to West German firms—backed by the United States—and Italian companies, die hard, while there also remains a strong feeling that much British avionics skill has been handed over to the continentals in past joint projects.

Despite these old wounds, British avionics may be expected to collaborate more fully with the Europeans in future as the French and the West Germans begin to match the across-the-board capability of the industry in this country.

But deals will be done on a commercial, rather than on a government-inspired basis, the major object being to keep the volatile American industry at bay on the Continent where they already have a firm foothold through their continuing sales of transport and military aircraft, and there were longer-term signs that the policies of the Community in such things

by J. W. Sutherland
Managing director
Marconi Radar Systems

It is recognized increasingly that electronics in many forms is a major high-technology element of what is loosely defined as aerospace and that not only are techniques, applications and the scale of activity advancing now, but they have enormous scope for future evolution.

The part played by electronics in the field of aerospace is of cardinal importance in the aircraft, the spacecraft and in the ground environment. In defence applications, for example, there have been exciting advances in sensors, missile systems and data systems for the gathering, dissemination and use of information almost entirely in the area of electronics.

Even more spectacular developments are planned. In the civil field, air traffic control, air navigation, aircraft control and data systems, air communication and satellite communication are obvious examples of aerospace activities dominated by electronics.

It can be argued that Britain is involved in an economic conflict which is as severe and damaging in its implications and outcome as any military confrontation, and that any strategic considerations of national defence in the broadest sense must take into full account the economic aspects of an overall policy. Thus defence expenditure directed to high technology research and development and to the procurement of satisfactory

advanced hardware can be doubly beneficial to the nation: first in providing the complex defence capability which is necessary to fulfil our obligations to our partners and to give the country a military credibility; and second, in providing the stimulus to export by generating further investment in research and development and helping to sustain an industry on the scale necessary to compete in the world. This dual value is particularly appropriate in electronics. It is sometimes argued that a cut-back in government defence spending will stimulate exports by releasing capacity; the opposite has been the experience in the past decade or two.

Taking an even more fundamental view of the economic situation, it is apparent that our survival as a trading nation depends on the most effective use of our own inventiveness, skill and ingenuity. It would seem that the sector of British industry in which these qualities can be most usefully deployed is in electronics in general and aerospace in particular.

Electronics is an industry of outstanding benefit to the economy because it can react quickly to technological change, the consumption of imported raw materials and fuel is fairly low, and the capital investment necessary to sustain a thriving business is within normal corporate means. Above all, the situation in the market place could not be better. The world market which has been reasonably

satisfactory for aerospace electronics for some years is beginning to open up in a big way, and if we attack it hard, the potential is enormous. Fortunately, although the stimulus inevitably has come from oil revenues, actual and potential markets are by no means limited to the main oil producers. In aerospace electronics, investment in research and development, plant and facilities, brains and skill and in efficient marketing has achieved remarkable results in the past in the export markets. The opportunity to become even more successful positively exists now. Many civil and military markets for aerospace electronics have been opened up in the past decade or two, and a fair proportion of these are capable of substantial expansion.

It is important that continuity in world markets be preserved, by divorce from political involvement, by government encouragement of exports through use of defence expenditure, where it will stimulate development of exportable equipment, and by the Government abstaining from overseas purchase of equipment unless there has been absolutely no possibility of avoiding such a course without serious damage to our capability. The repercussions of overseas purchases of aerospace electronics and the resultant setbacks to British industry are perhaps not fully appreciated. The loss of business itself represents a loss of investment in research and

continued on next page

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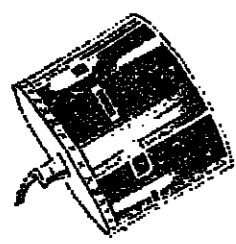
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Bomb guidance replaces aiming Omega joins the radio aids

By R. C. Ashworth

If one paramount lesson was learned from all the bombs, shells and bullets fired in the Second World War, it was that throwing things at your enemy in a random fashion is costly and rarely does the job well. This led to a tremendous investment in research into ways to get the bang to him rather than roughly in his own area.

This concept, coupled with the tremendous technical advances made under the pressures of war, gave birth to a new industry—guided missiles. Their most important ancestor was radar, which had already demonstrated its ability to detect and locate an enemy. What more natural than to extend this capability to guiding a missile on to him.

Thus some of the simplest guided missiles rode directly along the beam from a ground radar locked on to the target. Others used heat-seeking devices in the final phases.

Britain was in the front rank of this new technology; the experience and knowledge gained by the research establishments was applied to the first generation missiles—Sea Slug, Thunderbird and Bloodhound—replacing the place of AA guns and Fireflash, Firestreak and Red Top replacing the aircraft cannons of the 1940s and early 1950s.

These were, however, simple weapons by comparison with their modern counterparts. These owe their existence to the huge strides made in the technology of the electronics industry.

During the past 25 years electronics have progressed through several generations of components, from valves to transistors and from transistors to integrated circuits. All these have led to reductions in size and increases in reliability to the point where it is now possible to put a complete radar system not only on the ground but in the nose of the missile itself.

The significance is that it is now not only feasible, but common practice for the missile to home on to its target and to determine when the target is near enough to be destroyed, then activating its own warhead.

These improved capabilities have given rise to startling improvements in effectiveness (or probability of kill) in all fields. The ground based SAM recently proved itself a match for modern aircraft and the anti-tank weapon did likewise.

One of the most dramatic advances is in the air-to-air missile which gives improved detection range, acquisition range and kill in the interception role.

In the air-to-surface field, greater emphasis has been placed on the stand-off weapon—that is, a weapon which can be fired from an aircraft outside AA range and find its own way to the target. This general concept of stand-off weapons has been found its way into the old fashioned free-falling war bomb, as illustrated by the use of smart bombs by the United States Air Force in Vietnam.

The cleverness of guidance systems has itself given rise to a sort of three-dimensional chess game. This is ECM (electronic counter measures) and ECCM (electronic counter counter measures). This is a fascinating study in itself and involves a sequence of detection, jamming and deception in which one side develops a technique and the other a counter-technique. The art is to predict what the enemy will do to counter your move, then counter his move before he thinks of it.

These moves imply the design and development of sensors and processors small enough to be built into the guidance system. In the latest series of British weapons this has reached the point where a digital computer is carried in the missile itself to process the information received from the sensors, determine from this what moves the enemy is making and activate the correct counter-counter measures, all in the time of flight from release to target.

By comparison with the more traditional fields of propulsion and aerodynamics, the electronics areas, it is, therefore, not surprising that the greatest impact has been in the electronics areas. It is, therefore, not surprising that the cost of the guidance system represents half of the cost of the missile, however, this is more than justified

in terms of pounds sterling per kill which is the true test of cost-effectiveness in this business.

The most recent demonstrations of this were in the Yom Kippur war where, for the first time, the Israel Air Force found itself being shot out of the sky not by fighters but by SAMs. These SAMs are by no means the world's most advanced systems.

Surprisingly, in view of the public attention to British purchases of foreign missiles, Britain has never ceased to be one of the world's leaders in missile technology. Successive governments have made considerable investments in fostering research and techniques study in an unbroken sequence. As a direct result of this faith in the industry Britain is probably in the vanguard of the world in missile-borne radar guidance.

The Royal Navy's Sea Dart missile, replacing Sea Slug, is the most effective shipborne AA weapon in any service. A radar with Blindfire radar is certainly the leading all-weather short-range air defence missile for ground use. The Marconi is yet another type of guidance and the wire-guided Swingfire is among the best anti-tank weapons in the world.

The latest generation of weapons will be even better. Its impact on the tactical side of warfare has yet to be fully appreciated. However, it is already clear that not only can we protect ourselves more effectively, and in total terms more cheaply, with our own equipment than by buying it abroad, but also, given encouragement, we can improve our balance of payments situation through export sales. As an example, Britain recently sold to the United States a licence to produce an air-to-air guidance system developed in this country. This deal alone could bring many millions of dollars in royalties.

One of the more interesting sidelights of the missile industry lies in its contribution to the principle of deterrence. The greater the certainty of being caught, so the increasing probability of being shot down is likely to make people think twice. This is no idle boast—the time has come when the probability of kill will be approaching unity.

By Mark Lambert
International editor,
Flight International

We have probably seen the end of the navigator in the air, at least in the sense of the Sir Francis Chichester who combined sextant, tables, charts, compass, Doppler and compass platform, electronic bearing and distance measurement from ground beacons or radar observations have long since replaced them.

What has been greatly improved and elaborated in recent years is the processing of this raw information and the provision of controls and indicators with which the pilot can talk to the system, demand specific information and read the answer.

The advances in navigation, then, are not the invention of basically new aids to navigation, but of improving the tools for the job.

In the military field, inertial navigation is still the standard high-grade method, although the reliability, cost, size and weight of inertial systems have improved tremendously in the past five years. For shorter range purposes, or where cost and space are limiting, Doppler radar and gyro direction indicators are proving to be more and more effective alternatives to the pure inertial system, at a tenth the cost.

Inertial navigation has established itself as a civil transoceanic aid and nearly all long-range airliners carry three sets, which carry out virtually all en route navigation.

Where then, in this technology-ridden world, can anything new emerge? Inertial navigation will not radically change. Neither will the beacons on which the airways are established. Neither will ground-based radar. But, in just one new version of a radio aid, called Omega, we see the future. The digital computer in all its forms will revolutionize the processing of navigation information. Electronic displays will revolutionize the way in which navigational information is presented to the pilot.

What this means is that the electronic techniques which have emerged from computing and automation and extreme miniaturization

are becoming available in the aeroplane. The cross-fertilization between electronics and aviation is probably more fruitful now than ever before, but it is improving the way of doing known jobs, rather than finding new ones.

The new radio aid, Omega, which started life as the measurement of very low frequency (VLF) radio transmissions, is now on the verge of becoming a sound commercial proposition. If several complicated corrections can be applied, a VLF receiver can measure distance from the transmitter. By measuring the distance from two transmitters, a position can be triangulated.

The range of these stations is so long that eight stations cover the Earth. But corrections need to be applied, and the usual method of tables, were it not for the miniature computer which can store and apply all the variables without burdening the human operator.

Being entirely electronic, Omega does not require the expensive mechanical servicing needed for inertial systems. Also, Omega is continually referenced to the Earth's surface, while inertial position is memorized from a known starting point and may wander thereafter. Omega is a name to watch.

The small, special-purpose digital computer has already earned its place in aircraft as a universal arithmetic box and has been adapted to perform the essential and fundamental processing for almost any function, whether it be navigation or engine control or autopilot. In navigation, the computer is uniquely able to take the existing range of basic navigation signals, civil or military, and process them into the answer to the "Where do I steer and for how long?" questions which are the pilot's principal navigational problems.

So nothing has changed fundamentally, but nothing is quite the same. The black boxes have become much more powerful and more able. The job is being done better, despite the departure of the navigator. All of which really means that the new technology is worth its keep.

International debate over most acceptable apparatus

By Pearce Wright
Science Correspondent

A few months ago a pilot of a Cessna private aircraft was rescued by air traffic controllers in frightening circumstances. Within minutes of take-off the altimeter and airspeed indicators failed; followed shortly by the failure of the rate of climb instruments.

It was night time, but conditions were fair. He was brought safely down because the air traffic control centre had a computer-based tracking system which continuously produced ground-speed calculations and estimates of the rate of descent. At one stage, approaching the outer marker of the airfield, the pilot's ground speed had fallen to 90 knots and he was ordered to increase it to 130 knots for a safe approach.

The pilot was clearly fortunate to have flown from a well-equipped airport. While the major centres of air transport are usually well-served with electronic aids, there are many small airfields often used on a seasonal basis, mainly for tourism, with the minimum amount of equipment to sustain an operating licence.

Yet there is almost universal agreement that most major fatalities occur at the moment of landing.

The most up-to-date equipment essential for major international airports costs millions of pounds. Without such apparatus London, Paris, New York or any of the other big air terminals could cope with less than a quarter of their present landings and take-offs. Most of these centres are expanding capacity either by building a new airport or extending facilities at the established one.

Air traffic control is a classic example of instant information processing and communication. Nevertheless, the development of satisfactory systems remains a subject over which the air transport industry and its equipment suppliers continue to argue. There is no dispute over the level of safety being sought, the dispute is over the possible technical and economic alternatives on offer.

Various groups are debating the pros and cons of the type of radio communication system considered most accurate, easy to handle and simple to develop. The air crew, which is also financially practical for a commercial airport. The nature of the airline business makes this an international issue, as the development specialists in Britain have made outstanding contributions.

One of the most widely known successes was the work of the Blind Landing Experimental Unit at Bedford which developed an all-weather landing equipment suitable for general aviation use. Rigorous conditions have to be imposed on the communications systems introduced for airport work whether they are for speech links, automatic transmission of data between aircraft and the ground, or any other communication service. The main goal is to get freedom to work in Spacelab starting with projects lasting seven days and increasing to 30 days.

An initial flight is planned for April, 1980. The Spacelab could carry equipment weighing at least between 6,500lb and 8,800lb for use in scientific experiments. With the exception of the Skylab experiment, this is an unheard-of amount of experimental apparatus to go aloft in a manned mission.

Proposals for payloads for Spacelab are open to all branches of science and technology. There are two overriding conditions: results of experiments must be freely disseminated, and equally, the main purpose of an experiment must not involve direct commercial exploitation.

Selection of experiments presents no particular difficulty for the ESA's series of scientific satellites carrying packages from several universities and research institutes.

The idea of the Shuttle is to take payloads of men and equipment into orbit but to leave them with a small vehicle in which to work and move in space. Under the cooperation agreement between the European Space Research Organization and NASA, the Spacelab is the European Space Agency's contribution to the Shuttle.

As far as NASA is concerned, after the ASTP comes the space Shuttle, or the reusable launch vehicle, which from 1980 will ferry men back and forth into space at a fraction of the cost of today's launch vehicles.

Shuttle is exciting project for Europe

The last Skylab mission of the National Aeronautics and Space Administration (Nasa) was seen as the end of an era not just for the manned space flights but in the development of avionic systems and the wide range of associated technologies.

Although most of the advances in avionics came from the enormous amount of research and development behind the missile programme, the civil side also contributed substantially.

Contrary to what seems a widely held belief, the contribution from the manned space effort has not suddenly ceased now that only one mission remains for the near future. The remaining flight next year is the joint Soviet/United States project in July. Two Russians in a Soviet Soyuz craft and three Americans in an Apollo command module will dock to form the first international space workshop in orbit.

With their recent Soyuz 14 spacecraft the Russians seem to have tested satisfactorily the improved docking and safety systems requested by American advisers during technical exchange visits between the two countries.

Officials from both sides of the venture, in a major test project, are confident that launching will go as planned at 15.30 Moscow time (12.30 GMT) followed seven and a half hours later

World sales have huge potential

development, and depresses the sale of the business, with a obvious effect on power to compete overseas.

More subtly perhaps, selling overseas is doubly difficult if the system concerned is bought by one's own government from a foreign competitor. More dangerous still is the Government's ultimate dependence on overseas suppliers to the extent that a national capability no longer exists and allows a future bargaining position in the supply of spares, support and follow-on equipment.

Factors which affect overseas business and which have helped to build up aerospace electronics into a highly successful exporting industry, are worthy of consideration. Their importance will vary according to product and territory and cannot be subjective. The product itself is vitally important; without the right product for the market, hope of survival in the long term is very slender. The equipment will vary enormously and certainly what is appropriate to one group of customers may be quite unattractive to others.

However, the criteria are probably universal—first, cost effectiveness, covering the total capital and running costs of providing a future background that the business expansion can and period. Second, reliability must take place.

World sales have huge potential

continued from previous page

and ease of maintenance, which are themselves elements of the total cost effectiveness, are extremely important in these days of working shortages of technically trained manpower.

Third, operational flexibility which enables the supplier to provide or the user to deploy the same basic elements in a variety of configurations to meet differing requirements. Finally, and perhaps rather unexpected in such a highly complex market, the successful worldwide supplier must be prepared to respond to fashion.

Where marketing is concerned, effective export selling needs a strong organization at home to back overseas effort in the territory, a strong selling team to bring in business, and on the ground a permanent presence over a long period to gather background intelligence in depth and provide immediate information necessary to progress and clinch an order.

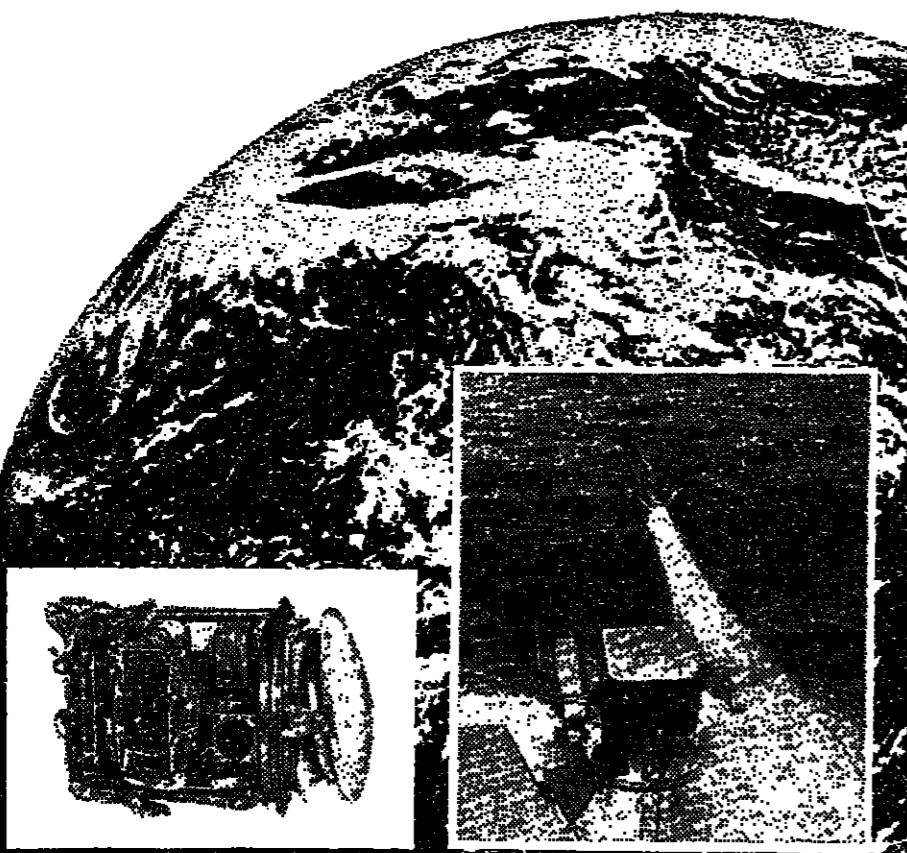
Britain, with its long tradition of world trade is probably as well experienced and equipped as any country in this respect; most major companies have overseas subsidiary and associated companies, long-established agents, representatives and networks of their own expatriate staff. It is from this background that the future expansion can and period. Second, reliability must take place.

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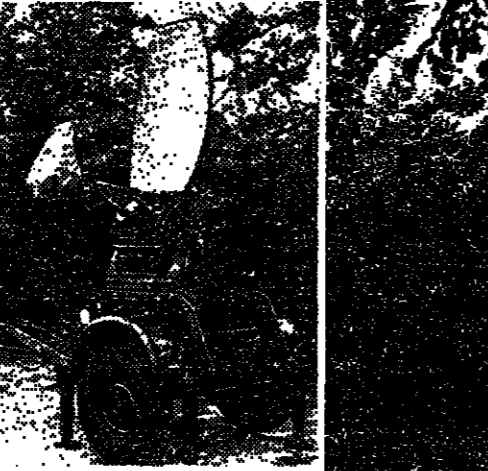


Active radar homing head for anti-ship missiles

Guidance system for Sea Dart ship-to-air missile



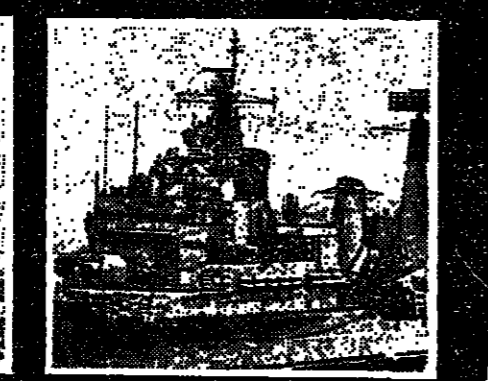
Microelectronic anti-aircraft homing head for Sparrow



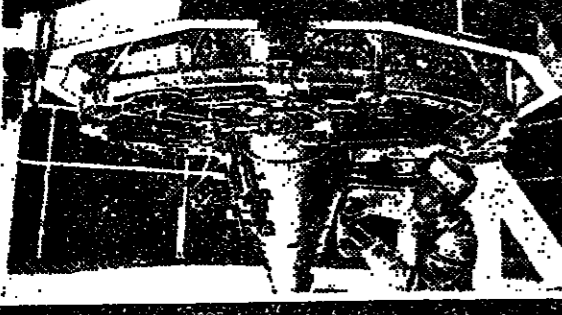
Blindfire radar for Rabier



A Tigerfish torpedo being lowered into a Royal Navy submarine

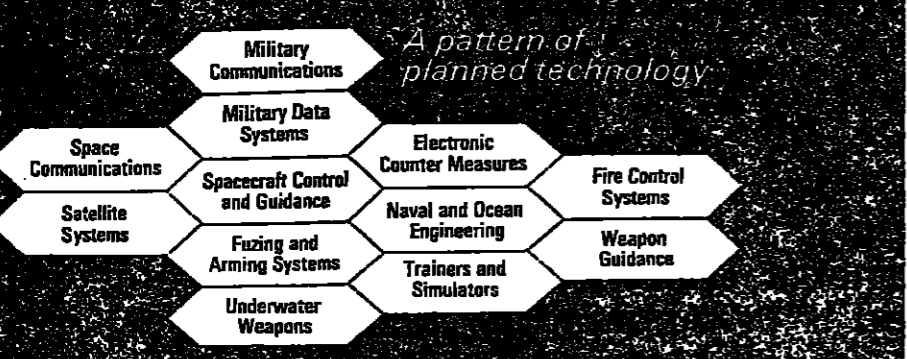


SCOT installation on HMS Blake



Skynet 11 satellite in manufacture

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مكتبة الأمل

Refined instrument displays reduce cockpit workloads and enable pilots to fly blind in fog

by I. F. E. Coombs

Workload is now a familiar word to both specialist and layman and is used in most areas of industry and transport. Part of this load is the reading and the interpretation of instruments. It is measured in different ways depending on the situation, whether we are studying the work of the motorist, the operator of a factory machine or the pilot of an aircraft.

As aviation developed with each new generation of aircraft flying faster and higher, climbing and descending faster, more and more instruments were added. At first they were provided just to enable the pilot to know how fast, how high and which way he was going.

Later, a family of analog and gyro instruments enabled him to fly blind in fog or at night or in low visibility. Another step was the addition of radio navigational instruments so that precise tracks could be flown.

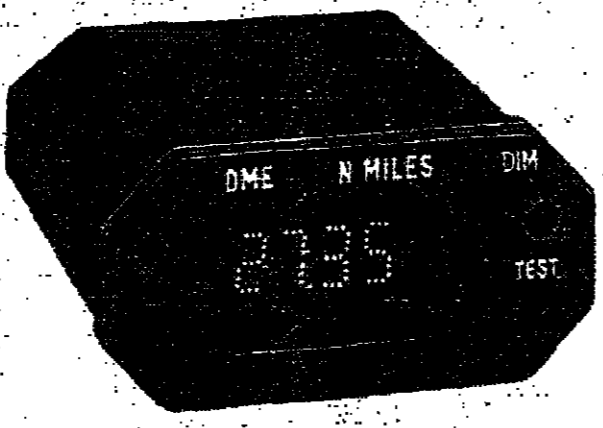
What is the pilot's instrument reading workload? In terms of the motorist and the machine operator? The motorist rarely makes

use of instruments as a primary aid. Just as many of us look at a watch to find out how much time has elapsed or remains rather than to see the actual time, so the driver is often more concerned with how near he is to the speed limit.

The machine operator does not rely usually on instruments once the initial settings have been made, whereas the pilot, particularly in a large aircraft, is concerned with a number of varying parameters and with operating to precise values not only of speed but height, vertical speed, heading and engine performance.

Basically, there have been two ways of showing information to the pilot. First by the familiar pointer moving across a scale—the clock type instrument. Second, by giving the pilot a pictorial or position display—the attitude director from which the pilot can see instantly whether he is level or banked to left or right and whether the aircraft is flying level or climbing or diving.

For many years attempts were made to reduce cockpit workload by making drastic changes to the face of the dial type instruments, particularly the airspeed indicator and the altimeter, were limited because, if they were to be sensitive enough to give acceptable accuracies, their mechanisms could drive



One of the latest DME indicators with LED display elements.

only lightweight pointers over limited scale lengths. In the past 15 years instrument mechanisms have been refined and elaborated by incorporating electronics and miniature electric servo motors so that there are now many different ways of presenting clear, easily read and unambiguous information to a pilot. No longer do the limitations of the mechanism dictate the type of display. For example, the counterpointer instrument gives both a numeric reading as well as a conventional pointer-on-dial reading. The

best tracks to or from navigational waypoints and alternative routes, as well as air traffic control information.

In fact, given the suitable computer and communication link with ground generated information as well as the aircraft's own systems, the pilot can call up different groups of information. This ability to select the amount and type of data needed for a particular sector of the flight is an important feature of the electronic displays and one which it is not practicable to achieve with conventional instrumentation.

By using two or three CRTs, airliner pilots can select basic flight data on one CRT, engine data on another CRT and navigation and communication data on a third.

The CRT is the most developed electronic method of presenting integrated data. However, if it is to be used without a hood in the 7,000ft/amber environment of the flight deck, the required brightness level means a high power consumption. There are other problems, such as life span, to which research is directed and the provision of shades of grey and of more than one colour. Seven shades of grey are now available and sufficient progress has been made with multi-colour CRTs to warrant trial installations in aircraft.

Looking into the future of a challenging career

by Parry Rogers
director of personnel
Plessey Company

As Farnborough comes around again, boys of all ages renew their enthusiasm for the aircraft on display and for all the technical wizardry of the aerospace industry. As the younger boys demonstrate their aeronautical knowledge and are able to explain to their fathers the difference between MdB and VOB, some parents may be anxious because of the impracticalities of the spaceman and test pilot ambitions, and because they lack information about suitable careers to which their sons and daughters can be encouraged to aspire in industries which can be expected to prosper for many years.

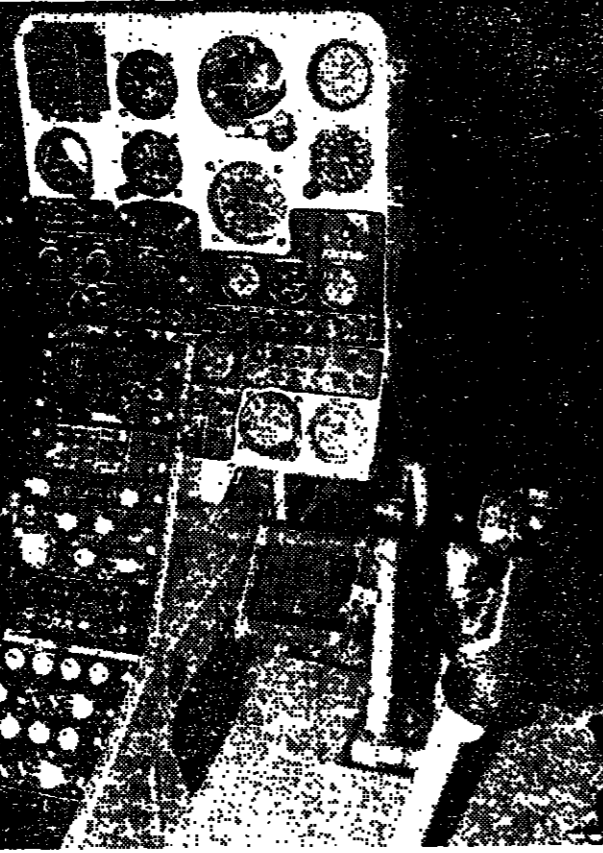
One such industry is electronics and this article offers to parents and students some information about careers in electronics and where to turn for more detailed information.

It is not possible to define the uses society will make of electronics in the future but it may suffice to say that electronics are the most pervasive technology in our history. The dependence of the space and Concorde programmes on electronics is well known and will be much in evidence at Farnborough, but many of the less visible electronic products are of comparable technical interest and of greater value in terms of business and employment.

The outstanding example is the computer, employed in business, government, medicine, universities, traffic control, machine tool control and a host of other uses. Electronics are also the technology behind radar, television, satellite communications, radio in the air, at sea and in your car and home, and in the telephone system we take so much for granted.

have lost their jobs through no fault of their own in their forties only to find that no one will consider them for a comparable job because they lack the qualifications they should have obtained in their youth.

There are a variety of channels of entry into the electronics industry and individual advice is necessary to explore the right one for each boy or girl. Let us consider just two of them—



The controls of the Westland Gazelle helicopter include, in the left-hand corner, the units for the Plessey PTR377 UHF/VHF communications transmitter 'T' receiver and the Plessey PTR446 IFF/SSR transponder.

potential. Not all schoolmasters are reliable judges of a person's capacity for vocationally oriented education and some young people develop an enthusiasm for education of a kind they see as more meaningful than the subjects inflicted upon them in some schools.

The apprentice technician will undergo a planned blend of practical training on the shop floor and in the technical offices of his firm and technical education through Ordinary National Certificate, Higher National Certificate, possibly to one or more degrees.

From this apprenticeship and HNC attainment can come membership of a chartered engineering institution which is the professional accolade and the way is opened to the top.

By comparison the graduate has had three, or even four years at a university where his personality should have matured with a broad view of life, society and culture. After appropriate training and experience the graduate will attain the same professional qualifications as his HNC colleague and will be competing with him for technical and managerial positions.

Electronics is the branch of engineering most suited and most welcoming to the qualified female. There is scope for them in research and development, in drawing offices and in engineering offices. For daughters showing an interest in Farnborough and similar subjects, give her help and encouragement. We need more women engineers.

There are two primary career paths for the electronic engineer to follow. The individual whose flair is technical, whether research, design or in another specialisation, needs to receive recognition and income growth to reflect his contribution.

A parallel professional career ladder alongside the managerial ladder is needed to show that the management route is not the only way to success and that the engineer with talent does not have to take responsibility for other people to achieve recognition. For many the managerial ranks are the right and proper target.

How wise are those organizations which have changed the structure—or at least the nomenclature—with the word foreman abolished and the first level of supervision given management status so that it is an acceptable position to the fledgling engineer, as well as a position of achievement to the man who has earned promotion from the shop floor?

There are some spectacular success stories in the electronics industry where top management positions have been reached by men in their thirties and the trend continues to be in favour of youth, particularly as the rate of technical change in this industry continues to accelerate.

Perhaps, therefore, some readers may look back on Farnborough 1974 as a turning point. By taking your son there, indulging his enthusiasm for the display and the exhibits and then subtly diverting his interest to the vital contribution of electronics, first to aerospace and then to almost every other field of human progress, you will motivate him to make his career in this dynamic and exciting field.

By this process he may become the managing director of a Plessey division in his thirties and able to take good care of you in your old age as you sit watching world events on your electronic wall—including, perhaps, the air display of Farnborough 1984.

Novel radar scanner provides many data simultaneously

by P. E. G. Bates
divisional managing director, Plessey Radar

The radar division of Plessey is actively involved in a number of exciting new developments aimed at improving the facilities available to both civil and military users.

One which has recently attracted worldwide interest is the AR3D, a long-range, three-dimensional surveillance radar which, because of its revolutionary design, offers significant advantages over other conventional plan and three-dimensional radars.

The AR3D combines mechanical scanning in azimuth with the novel electronic technique of scanning in elevation by using a pencil-shaped beam which sweeps in the vertical plane at a high rate.

In this receiver system the return signals are amplified and separated into channels representing elevation bands approximately 2°. The signals are time-compressed and their frequencies analysed to give fine elevation measurement from which the target height is automatically calculated and is displayed alongside the appropriate target.

This radar provides accurate positional data and allows targets very close together, within 100ft, to be distinguished as separate targets more easily than with other radar systems. The signal compression system also gives greatly improved performance in detecting aircraft against a background of unwanted reflections from rain or other interference, whether man-made or natural.

The AR15/2 provides greatly improved detection of aircraft, particularly at low altitudes, over a wide range, with a significant reduction of unwanted ground, weather and 'angel' returns.

A further development, using the latest solid-state technology and mini-computers, is the Plessey Series 200 automated secondary surveillance radar system. In addition to aircraft positions derived from primary radar, the system displays automatically on the radar screen bright data labels moving with each aircraft's radar blip, showing call-signs, altitudes, courses, speeds, destinations and routes.

Integrated with the AR15/2 or other primary radar, the system forms an ideal, low-cost automated AUC system, within reach of users with limited budgets, suitable for airfield approach, terminal area control and long-range surveillance purposes.

Parallel with these developments, Plessey has introduced a new graphical display system called Series Nine. The display achieves a new standard of quality in the presentation of distorted characters and vectors; the latter, though achieving the accuracy of digital techniques, lacks the snags often associated with this type of design. A new high-precision printed circuit deflection coil has been developed for the Series Nine which achieves fast deflection speed, and a new no-compromise contrast-enhancing screen designed to reduce reflections from the display without degrading resolution.

The Series Nine display is aimed primarily at the radar market, but will also serve any application where bright, high quality graphic data is required from a computer system.

For air defence, however, the most advanced radar in the world is not, in itself, sufficient. The emphasis has to be on a company's proved capability to devise, engineer, install and maintain a complete system.

As a result of its work for the United Kingdom Government and other export projects, most of which are classified, Plessey Radar has one of the largest programming teams in the world, with the skills and disciplines necessary for real-time, computer-based air defence systems. This consists of system analysis, project definition, programming, and hardware engineering.

In the development of air navigation and terminal landing aids, there are two significant techniques now being used by Plessey Navids. The first is concerned with en-route navigation beacons which transmit bearing information from a fixed ground reference datum. These VOR (very high frequency omni-directional) beacons not only assist accurate navigation along defined airways but can also be used for the marshalling of traffic on the approach to busy airports. With the intensity of today's civil air traffic it is essential for air safety that the data transmitted shall be precise, constant and accurate.

Unfortunately, conventional VOR beacons are sensitive to features in the terrain surrounding their site and finding a precise spot where this unwanted interference from ground reflections is low is not an easy task.

The new generation of beacons now being supplied by Plessey Navids incorporates the Doppler principle of transmission. Put simply, the Doppler effect is the change in frequency of a received signal when either the transmitter or the receiver is moving, one in relation to the other. The most homely example is the change in the sound of a train whistle as the locomotive advances towards and then recedes from a stationary listener.

Plessey DVOR (Doppler VOR) beacons are immune from most of the disadvantageous effects of ground siting which offer not only greater flexibility of choice for siting but signals of a higher consistent stability which permit more accurate track-keeping by aircraft.

As part of the United Kingdom Civil Aviation Authority's major air traffic system programme of re-equipment, Plessey DVOR beacons are scheduled for installation at sites throughout the United Kingdom. This forward-looking programme will ensure that Britain will be one of the first countries to have 100 per cent DVOR beacon coverage in its airways systems.

The second major advance in techniques is that being applied to instrument landing systems and their future development in connection with the microwave landing system (MLS).

Conventional ILS use at major airports throughout the world, transmits ground signals surrounding the aircraft to be flown down a safe descent path to a runway landing. It requires precisely radiated beams, in azimuth (localizer) and elevation (glide-slope), to be radiated from equipment located on the ground near the runway. Frequently, surrounding terrain or proximity of buildings—and even other aircraft taking off—use unwanted and undesirable reflections which affect the essential accuracy of these beams and could result in the pilot's instruments recording spurious information.

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Fighting the battles by computer saves men, money and machines

by J. D. Conry

Simulation is the technology of make-believe and, as in all games of pretence, has the key advantages that the players need not really get hurt and the game is cheaper than the real thing. Since it is now fashionable to measure injury and death in financial terms these can be considered as complementary.

It is hardly surprising, therefore, that as aircraft have become more advanced and consequently more costly, the emphasis on flying in simulators has increased. Naturally the simulators have become more complicated, not just matching the aircraft system but increasing their realism and therefore their effectiveness as replacements for the aircraft.

Thus we have seen the progressive development from the original Link Trainer, used during the Second World War, which was to all intents and purposes a procedure trainer, right through to its logical successor the Apollo Spacecraft Simulation System.

The key advances in realism were made in the 1960s as demonstrated by the total change in training schedules during the decade; when, for example, the conversion training for a pilot transferring from one aircraft to another changed from being totally in the aircraft at the beginning of the decade to being only about 10 per cent in the aircraft at the end.

The fundamentals of economics are the driving force for this. Thus for a Boeing 747 or Douglas DC10 the direct saving from simulator training exceeds £10,000 a pilot, without taking into consideration the increased availability of aircraft not tied to training needs and the ability to train beyond the limits allowable on the aircraft.

Add to this the ability to carry out recurrent checks of pilots under readily observable and automatically recorded conditions, thus catering for the requirements of their period ratings, and the flight simulator becomes a necessity to any flight training organization.

The advances in simulator capabilities which have enabled this transfer of training from aircraft to simulator to occur are demonstrated by the difference between the £125,000 Boeing Stratocruiser simulator used by BOAC in 1951, which had neither motion nor visual flight capabilities, providing only flight procedure training, and the £1m simulator of today with six degree motion platforms and advanced visual systems.

The benefits in the military field are even more dramatic, since simulation here extends to cover the whole of the complex sensor weapons and countermeasures systems in a full mission simulator. This is highlighted by the latest and most advanced full mission simulator to be introduced into service by the RAF for Strike Command's Anti-Sub-

marine Warfare jet aircraft, the Nimrod. With this trainer, the RAF for the first time has a total crew trainer with each crew member being able to operate a full range of operation equipments in the coordinated, controlled and fully flexible tactical exercise setting required for both conversion and squadron training.

The Nimrod Mission Simulator has two parts: first a Nimrod Flight Simulator on a three degree of freedom motion platform with a Visual Flight Attachment capable of showing both land and seascape. This simulator provides the standard conversion, safety and continuation training for the pilots and engineers.

The second part is the Maritime Crew Trainer (MCT) which is, in effect, that portion of the Nimrod fuselage occupied by the navigation, sensor and communication team. The flight simulator and maritime crew trainer can be joined electronically to allow a full crew exercise or, if the flight simulator is required for purely pilot and engineering training, each part can be used separately. In these circumstances the MCT receives its "flight deck" input by way of a secondary non-standard pilot position.

The MCT fuselage houses the full range of ASW navigation, sensor, weapons control and communications equipment used by the crews to locate, track and attack targets. All systems

have realistic inputs/outputs which are coordinated to accord with the overall tactical setting required for any particular exercise.

Full allowances are made for aircraft manoeuvrability inside a geographical exercise area of 2,600 nautical miles square and also for target type, sea state, bathythermal, wind, under-water and other conditions normally experienced by the operators when flying the Nimrod on operational sorties. Equipments include sonics, electronic counter measures (ECM), radar magnetic anomaly detector (MAD), exhaust gas detector, weapon selection and release, and full navigation instrumentation. A motion platform is provided for turbulence effects.

An external console allows the exercise controller and specialist instructors to monitor student actions taken in the fuselage; to inject faults, environmental or target changes; and to record the progress of the exercise for full replay and analysis.

The MCT provides detailed and realistic training to meet the stringent requirements of both ASW conversion and squadron training without the need to assemble the submarines, surface vessels and aircraft which would be necessary in a live exercise setting. All these can be programmed into the computer system which coordinates and records each exercise in accordance with the weather

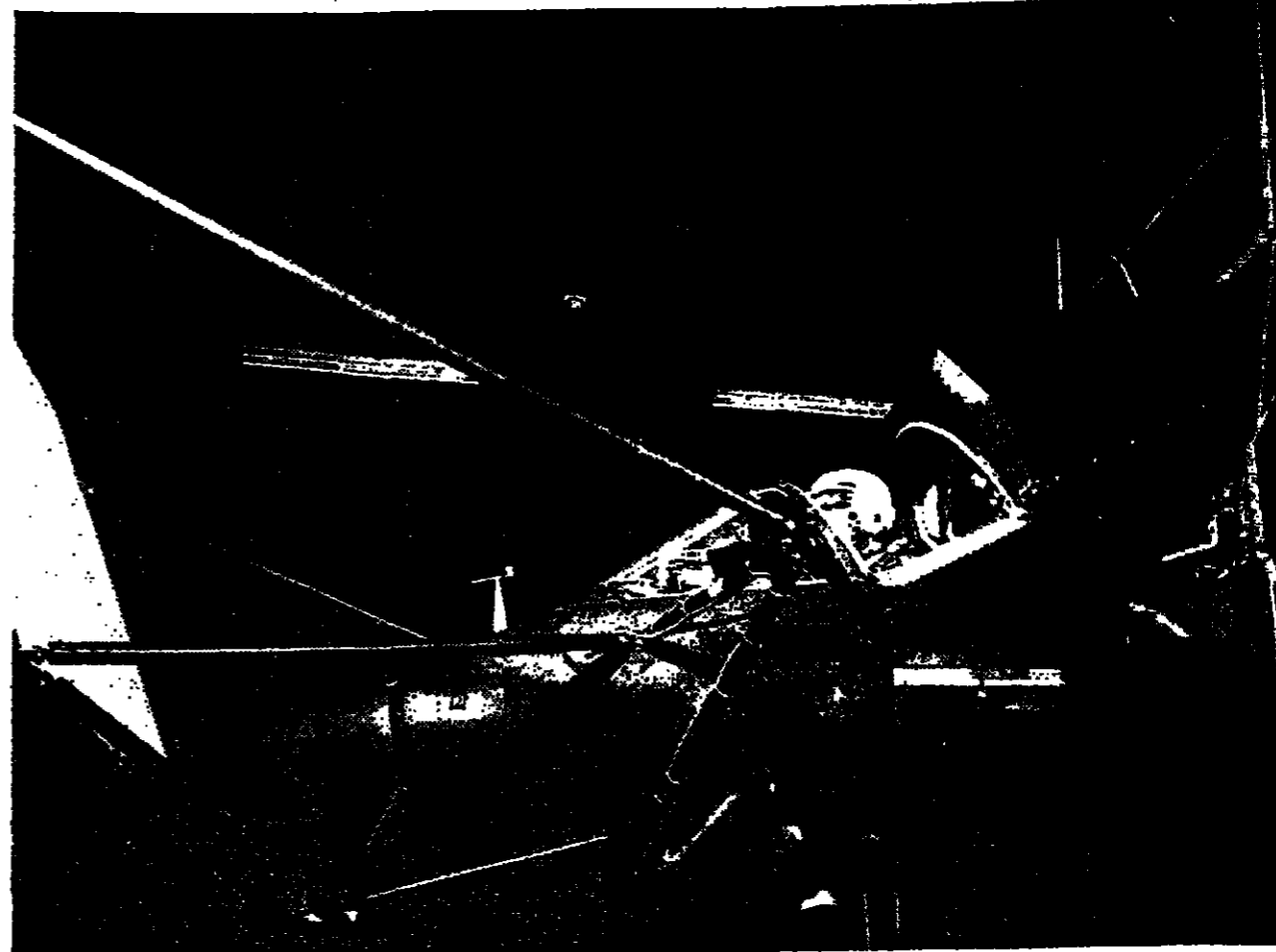
and other conditions required by the tactical setting.

The training value achieved by squadrons and training units using the Nimrod Full Mission Simulator has reached most of the goals set and will add enormously to the operational efficiency of the RAF ASW crews. In addition, the financial savings from reduced aircraft flight times alone mean the present simulator has paid for itself after about 18 months.

What of the future? There can be little doubt that Full Mission Simulators will develop further in line with later technologies. This will bring improvements in realism by the application of digital storage techniques to visual systems and radar land mass simulation.

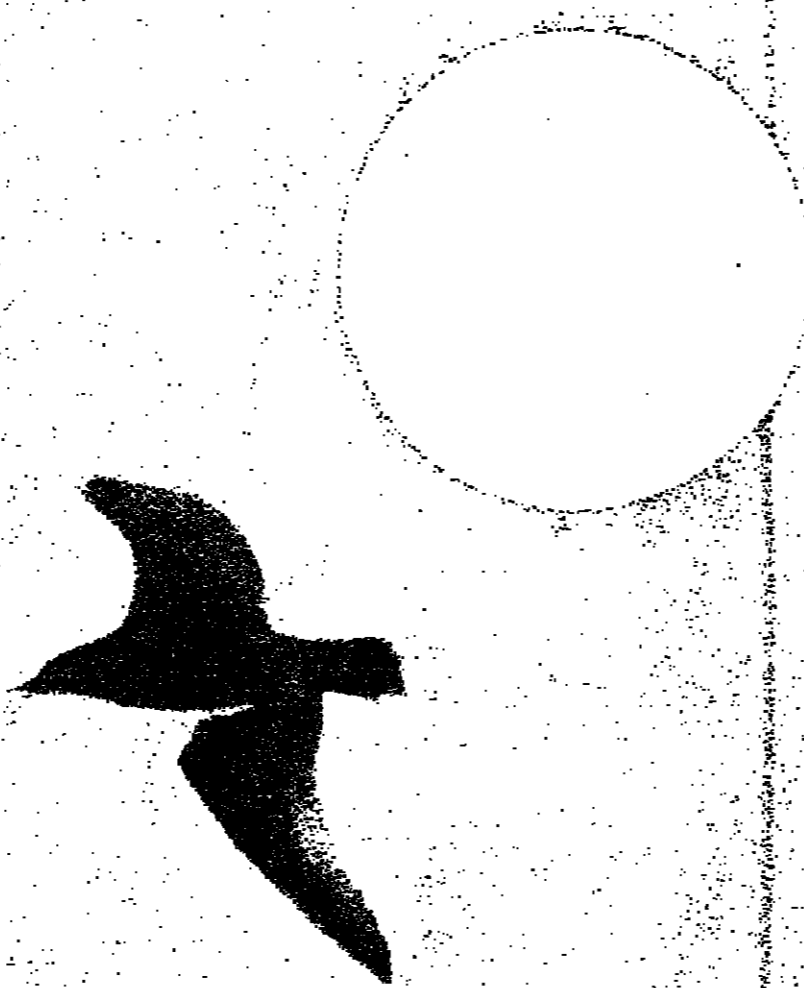
As with all modern computer-based systems, the trend to increase flexibility through modularity is already apparent, so we can expect to see the mini-simulator with growth potential and also the adaptable simulator. This same technological trend to compact modular systems leads to the possibility of increased mobility through trailerization.

Already it is possible to carry out training for full tactical missions more effectively using simulators rather than aircraft, at a fraction of the cost and risk. Future developments in simulator design can enhance their value to the user.



This Harrier cockpit is reproduced faithfully so that the transfer of training from simulator to aircraft is smooth and fast. The visual scene is projected on the nose-mounted screen by the three-barrel colour projectors to the rear.

AVIATION



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PHILIPS IN AVIATION as in many other fields, make a significant contribution to the future of man in the air.



PHILIPS

September 2-8, at Farnborough International '74

Britain keeps its head up

by Mark Lambert

Neither civil nor military aircrews can perform their missions without constantly scanning instruments. Height, speed, course, and even climb or descent are not immediately apparent by looking out through windscreen and windows. Yet they must be known accurately at certain times, and there are many other factors to be taken into account as well.

The most intriguing development in aircraft instrumentation is that an instrument is no longer necessarily a mechanical clock-like device indicating one or two measurements against fixed scales painted on the dial face. An instrument now is as likely to be an electronic display like a television screen or cathode-ray tube.

The first of these weaves a textured picture by scanning in fine horizontal lines down the screen. The second writes symbols individually on a blank background. Both will become common in cockpits.

To indicate speed, height, attitude and where-to-go, information electronically on a screen may sound complicated and expensive, but it has commanding advantages. Electronics, for a start, are more reliable and potentially cheaper than mechanical and electro-mechanical devices. They are more easily and reliably manufactured. Even the Swiss watch is becoming electronic.

A picture drawn electronically can be composed for the purpose at the minute, erased and replaced by an entirely different picture simply by switching the electronic circuitry. The same space can be used for a variety of entirely different patterns of information. The pilot gets the right information for each phase of flight, without scanning among rows of dials. And he gets it in his central field of view without hunting for it.

This concept has been in circulation since the early 1960s and its most spectacular manifestation has been the head-up display, invented in Britain as a further development of the traditional mechanical gyro sun on, so to speak, the gunsight and still a product of skilled knowledge almost exclusive to Britain. Nearly all head-up displays in America, Sweden and Germany are British made.

What the head-up display does is to form the symbolic information, in a series of lines, scales, sym-

bolts and figures, on the face of a miniature cathode-ray tube. This image shines through lenses on to a semi-reflecting glass plate mounted in the pilot's line of sight through the windscreen. The symbols are clearly visible as a disembodied, bright moving pattern superimposed on the outside world.

It is possible to give the pilot all the instrument information he needs in this form so that he need not look down at his instrument panel. He can fly with his eyes constantly on the outside world, but see all the necessary instruments at the same time.

This device, revolutionary in its time, has recently been developed much further. It was found a few years ago that a miniature digital computer could better "write" and move the instrument symbols in the head-up display. Once the computer was there, it could be extended to calculate, then display aiming instructions, as well as the basic instrumentation. So the head-up display (HUD) became the HUD weapon-aiming system.

The extended miniature computer could either give the pilot a bomb-aiming sight in the form of a single bright line to manoeuvre easily on to the target, or it could draw a tracer line depicting accurately the path of the fired bullet to the pursued aircraft. With electronic and computing refinements, both these techniques have produced devastatingly accurate aiming systems and have been proved in many combats.

Next came the combination of scanned television picture with the individually drawn symbols of the cathode-ray technique. An infra-red "eye" carried in the nose of the aircraft produces in total darkness a television-like picture of the terrain ahead and this can, by electronic video combining, be superimposed in the head-up display.

Now the pilot sees in his normal ahead vision at night an electronic picture of the scene before him, at the same scale and focus, with his head-up instrument symbols superimposed on it. If someone were to turn the traditional mechanical gyro sun on, so to speak, the electronic image would exactly overlap the outside world.

Pilots have made dive-bombing attacks in pitch darkness using this night vision system fitted in United States Navy A-7 Corsair fighters. The American Navy has called it Target

Recognition Attack Multi-sensor—Tram for short.

By now, optical, electronic and computer were deeply blended. It was only a matter of time before the fairly complex and heavy lens systems of the head-up display were set aside in some cases and the same functions performed with a larger, directly viewed electronic screen for the benefit of the navigator, who does not need to observe the sky ahead.

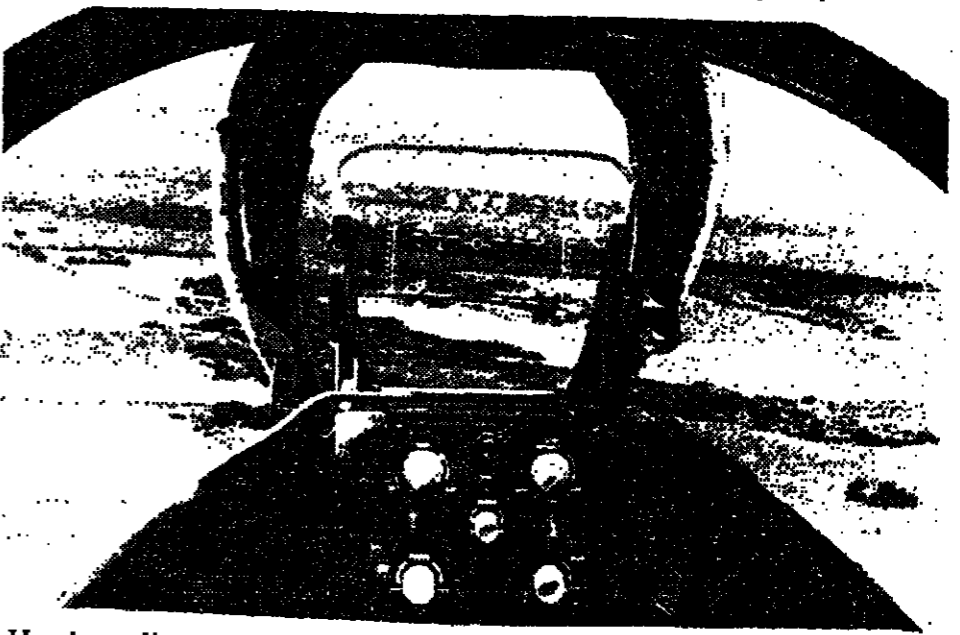
Light and dark shaded areas, lines, symbols and figures, all in a television type of picture, can form a symbolic equivalent of a complete flight instrument panel. Or the cathode-ray tube writing technique can "write" a panel of figures and words on the same screen. This could provide information of an administrative kind about the fuel, hydraulic, electrical and other systems in the aeroplane.

Next followed the use of the cathode-ray tube screen in the cockpit as the method of communication with the central computer, which more and more military aircraft are carrying. The computer displays information on the tube-face. With a keyboard beside the tube, the operator sorts the information, adds or deletes data from the computer's memory, builds up a picture of the operation and decides what to do next.

This is where the technology stands. Head-up display and its head-down equivalent are an accepted part of any new military aircraft. Europe's Multi-role Combat Aircraft (MRCA) gives the pilot a head-up display for all his normal flying and for aiming his weapons. His navigator has not one but three electronic screens and two keyboards for viewing and editing information generated by radar and navigation systems.

Both head-up and head-down displays communicate directly with MRCA's central digital computer, the nerve-centre of every attack mission and the central sorting house for all operational information on board.

The concept is really not so strange. Equivalent systems for using computers in industry and transport services are accepted as routine equipment on the ground. It is natural that the air should follow. Perhaps the technological conclusion is that, for once, electronics is leading aviation. Avionics are having to run to catch up with the techniques developed in the fast-moving computer world.



Head-up displays like this Elliott system for American attack aircraft allow the pilot to see all necessary instrument and guidance information in instinctively understood symbols without taking his eyes off the outside world.

More than a third of the UK avionics output is exported

by Kenneth Owen
Technology Correspondent

Britain's aviation electronics industry reflects the demand for increasing automation on board aircraft in three main ways. First, avionics has risen in importance to represent in many cases almost an equal one-third share with the airframe and engine in terms of value.

Secondly, avionics equipment is specified from the outset of an aircraft's design and, indeed, has come to influence the design of the airframe itself.

Still a fragmented industry

In most of the collaborative projects the industry believes that British avionics has suffered in the work-sharing arrangements because of the greater importance attached to the airframe and engine elements.

The danger of purchase of avionics equipment by the Ministry of Defence (Procurement Executive) by expediency from the shelves of overseas competition is the biggest threat to the avionics industry.

The British industry's output of electronic equipment for aviation systems amounted to about £156m last year, according to the Department of Industry. Of this total, about £60m was for airborne equipment (radar, electronic navigational aids, radio communications equipment, telemetry and guidance systems and other airborne equipment) and the remainder for ground equipment (flight simulators, trainers and teaching aids, radar, and fixed and mobile radio communications).

Over one third of the industry's avionics output is exported, but the Electronic Engineering Association called attention in its annual report earlier this year to rising imports. The ground and airborne radar and navigational aid markets both suffered further from import penetration, the association commented.

A "great improvement in exports of airborne equipment" was noted. Nearly one third of trade in this sector is with EEC countries and the balance moved further in the United Kingdom's favour in 1973. But imports from Japan and the United States rose sharply.

Among the main competitors in the international avionics business are Marconi-Elliott Avionic Systems (which claims to have the world's largest avionics production), Sperry, General Electric (US), Ferranti, Autonetics, Honeywell, Bendix, Lear Siegler, Smiths Industries and Plessey. Among other companies in Europe which include avionics in their business are Bodenseewerk Geratetechnik, Selenia, Microtechnica, OMI and Aerialia.

The industry is still fragmented in the United Kingdom. Other British companies in the avionics business include British Aircraft Corporation, Burndept, Cosor, Decca, EMI, Hawker Siddeley Dynamics, Lucas, Marconi, MEL, Pyle, Racal, Rediffon, Solarton and Ultra.

The stimulus behind the United States industry stems from a combination of weapons development, civil aviation projects, and space research and development. Indeed avionics equipment accounts for at least 30 to 40 per cent of the value of a missile, spacecraft or aircraft. In some of the scientific satellites this proportion is higher.

America's dominance has international advantages

by Pearce Wright

A recent analysis of possible shortages of raw materials and likely trends in inflation in the United States aerospace industry showed some sharp differences of opinion between management planners working for big companies and government economists in Washington.

The commercial economists were particularly gloomy about prospects in those sectors of the industry that depend on the more unusual materials and manufacturing processes many of which are essential for producing advanced electronic systems. Such systems are needed for avionics equipment, computers, radar units, earth stations and intricate devices that go into black boxes.

This vast array of apparatus is necessary for guidance and navigation, satellite communications, laser range finders and a host of other purposes with potential customers throughout the world. The only restriction American manufacturers face occurs when their products fit into a missile or an aircraft or satellite of strategic importance. Otherwise the army of scientists, engineers and technicians employed by the avionics firms turn out an almost endless stream of gadgetry.

Firms from other countries clearly find this avalanche of technology underwritten largely by defence requirements discouraging to compete against, but they benefit to some extent if the American avionics sector remains commercially healthy.

The stimulus behind the United States industry stems from a combination of weapons development, civil aviation projects, and space research and development. Indeed avionics equipment accounts for at least 30 to 40 per cent of the value of a missile, spacecraft or aircraft. In some of the scientific satellites this proportion is higher.

The broad range of work done by the Americans provides a fillip internationally by widening the number of uses to which new technology can be applied in space and aviation. It would be unlikely that the Americans

could hold the lead in all these fields unless they acquired a monopoly of the world's science and engineering intellect to match their enormous government investment in technology.

Nevertheless so far there are more areas in which the United States industry is technically ahead of its competitors than not. Hence there is a direct advantage to European companies in establishing technical licences with United States concerns for products that otherwise take many man-years to develop.

Licensing arrangements with overseas firms are not made lightly or too willingly, but special circumstances—agreements between Nato countries for instance—often provide the incentive for cooperation.

Keep control over exploitation

The dominance of American companies in this section of industry has not been affected so far by European Commission manoeuvres. Most of these manufacturers naturally want the maximum profit for themselves and so are reluctant to yield even a small corner of the market: their instinctive reaction is to keep tight control over exploitation of any product or technology which gives them a lever in the market-place.

A good example of this attitude has been in electronic components, computer systems and electronic instrumentation, which are based on the most advanced semiconductor circuits. On several occasions the American industry has been unwilling to part with the knowledge of semiconductor manufacturing until either a European company has almost caught up with the development or Nato military commitments made it politically desirable to have new approved suppliers of equipment.

The most recent of these reluctant negotiations over semiconductor circuits was instigated by Mr Heath and his Government. Several electronics firms in Europe were seeking to license the technology for a special type of electronic device. As it was useful to a Nato project the Euro-American link was eventually forged, but the agreement was made with a French firm.

At the beginning of the year there were signs of decline. The avionics industry had recovered so successfully in the previous 12 months from military cuts that the electronics sector made record profits. Renewed difficulties followed the fuel crisis which in the United States included the Arab oil embargo, and gave rise to predictions of slump conditions round the corner.

The most optimistic seers were prophesying an unpredictable year at best and more likely a time of turbulence for the first quarter of 1974 showed a totally different situation. Sales were \$1700m. If they continue at this rate—and the indications are that they will—then the total of \$5,300m for 1973 should be passed.

At present the American avionics industry seems to be demonstrating the truth of the dictum that a healthy home base provides the platform for generating a profitable export one. Resignation and impeachment issues notwithstanding, the Nixon Administration's relations with the Middle East and Soviet countries opened useful markets for the avionics producers.

A more encouraging development from the viewpoint of the European industry is a special scheme run by the United States Air Force to promote technical collaboration through a European office of aerospace research and development. The idea, known as a "window of science" project, aims at attracting proposals for developments from European teams that might have a particular application to American needs or be ideal for joint development when married with complementary work in the United States.

These programmes extend from an interest in long-term fundamental investigations using wind tunnels or simulators to more immediate practical issues such as designing instruments to check whether certain types of instrument panel accelerate pilot fatigue.

However, these are essentially topics covering common problems of aircraft and other vehicle design, operation and maintenance. Fundamental workers in a first-class research institution in the United Kingdom, a university in Germany or an industry laboratory in France have equal chances of discovering the best answers to such questions.

Somehow the liberal attitude shown to what might be considered subjects of intellectual freedom disappears over matters of commercial technology.

Behind this decision to adopt the American 9020D was an earlier, unsuccessful attempt to develop a single British automated system which would combine both defence and air traffic control, civil and military elements. A decision to do this was taken in 1962, but it was found that the data-processing requirements for defence and for ATC were very different.

Even within the ATC area, there were differences in handling the military and the civil traffic. Problems arose because of a lack of understanding of the size and complexity of the total system and software; and the computer hardware was not powerful enough for the job it was intended to do.

As envisaged, the all-in system known as Linesman/Mediator would have inter-linked two main processing systems, each with two main inputs. One system would process radar data, the other flight-plan information; radar inputs were from defence and ATC, while the flight plans were those for military and civil aircraft respectively.

In practice, the end-product was a data-processing system based on three main Myriad computers, which could cope with only a half of one of the two main jobs. It could not handle the combined radar, and it could cope with either military or civil flight plans, but not both. It was decided to use the Myriads for military flight plan processing.


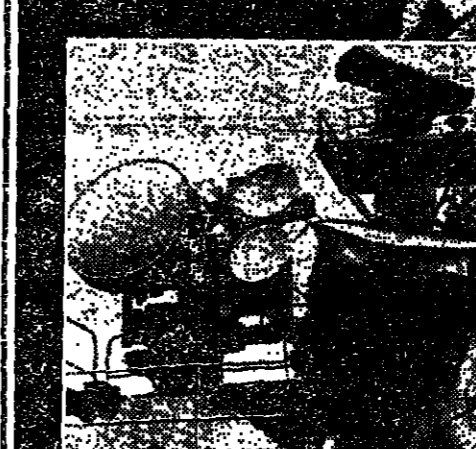
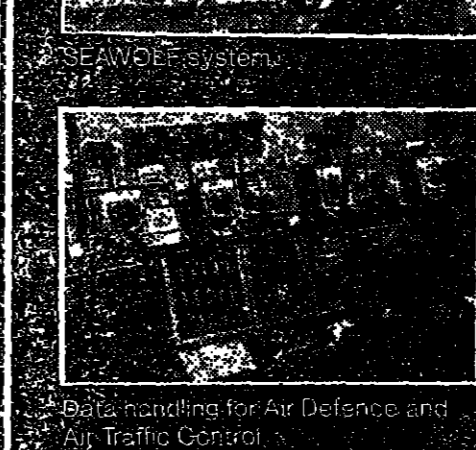



Meanwhile, other countries had moved on to more advanced data-processing systems for air traffic control. Britain had in effect lost about eight years in the abortive Linesman/Mediator project. There was a need to catch up rapidly, hence the decision to adopt and adapt the American system.

The IBM system is being tested at West Drayton, and should come into service, as planned, early next year. Initially it will handle civil flight plan data-processing, while the Myriad unit continues to handle military traffic, with on-line links to Heathrow, Gatwick and Manchester.

Later it will take in radar data-processing also, providing information from all radar stations in a massive, composite data base held in the computer. One of the next steps was expected to be more than £20m, of which more than £15m would be spent with British industry.

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A DIVISION OF SINGER

Air traffic control gets powerful lift

Two years ago the Civil Aviation Authority announced that it was ready to make a major advance in the automation of air traffic control in the United Kingdom. By 1975 a powerful defence and air traffic control, civil and military elements. A decision to do this was taken in 1962, but it was found that the data-processing requirements for defence and for ATC were very different.

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K.O.

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Control techniques developed for Concorde will play vital role in future safety

by Group Captain E. G. Palmer
Flight Controls Division
Marconi-Elliott Systems

After more than a decade of design, development and debate, we are now entering the era of supersonic passenger operations. Concorde has demonstrated startlingly low journey times on actual airline routes and has already "lapped" the Boeing 747, completing a double transatlantic crossing in under the time normally taken for a single journey.

This quantum jump in speed will tend to shrink airlines' long-haul timetables to the point where service frequencies approach those of short-haul subsonic jets. The avionics developed for Concorde will play a vital role in enabling these operations to take place safely.

Primary requirements for supersonic transports are accurate flight profile control to permit maximum payloads to be carried at minimum fuel cost, achieving good handling qualities over a wide range of speeds and altitudes and making pilot workloads compatible with the present long-haul jets operating at only two-

fifths the speed. This has placed special requirements on avionics systems for flight control and engine management as well as calling for the full range of avionics navigation, communications and instrumentation systems with which airlines are normally equipped. Like other long-range jets, supersonic transports carry inertial navigation systems as a self-contained means for making accurate passage across oceans and uninhabited terrain.

For both Concorde and the Russian Tupolev 144, great emphasis has been placed on the design and integration of their avionics flight control systems. Many of the techniques called for, which seemed so advanced 10 years ago, have gradually gained acceptance on more recent subsonic airliners and other aircraft, a fact which gives credit to the judgment of the SST designers at the time.

To take the flight control systems as an example, use of electrical signalling ensures a very close relationship between movements of pilot's controls and of the flaps and rudders which manoeuvre the air-

craft. All supersonic aircraft exhibit a wide range of control sensitivity throughout their speed range and electrical signalling provides very precise control at all speeds. Most airlines now use avionics systems for augmenting stability and supersonic transports are no exception. The SST uses automatic stabilization in pitch, roll and yaw and automatic throttle controls are also available as full-time aids to piloting.

Concorde's automatic flight control system provides 33 functions, twice the number for subsonic jets, and push-button controls ensure ease of selection by the pilot. The flight profile control, especially stringent during transition and in supersonic cruise, is selected by a single "max operating" mode button. When engaged, it controls the push buttons, housed in a controller on the glare shield, illuminate to give a constant indication of the phase of flight currently in control. Great care was taken in integrating these controls with the overall cockpit design.

As a result of these developments, airline pilots have

reached as quickly as possible and clearance is sought for transition to supersonic flight. When this is obtained, "max operating" mode is selected and the aircraft accelerates, first at constant indicated air speed, gaining altitude until, near sonic speed, a Mach number-dependent acceleration takes place. Once acceleration is complete, the cruising phase begins at constant Mach number, automatically controlled to a value depending on atmospheric conditions.

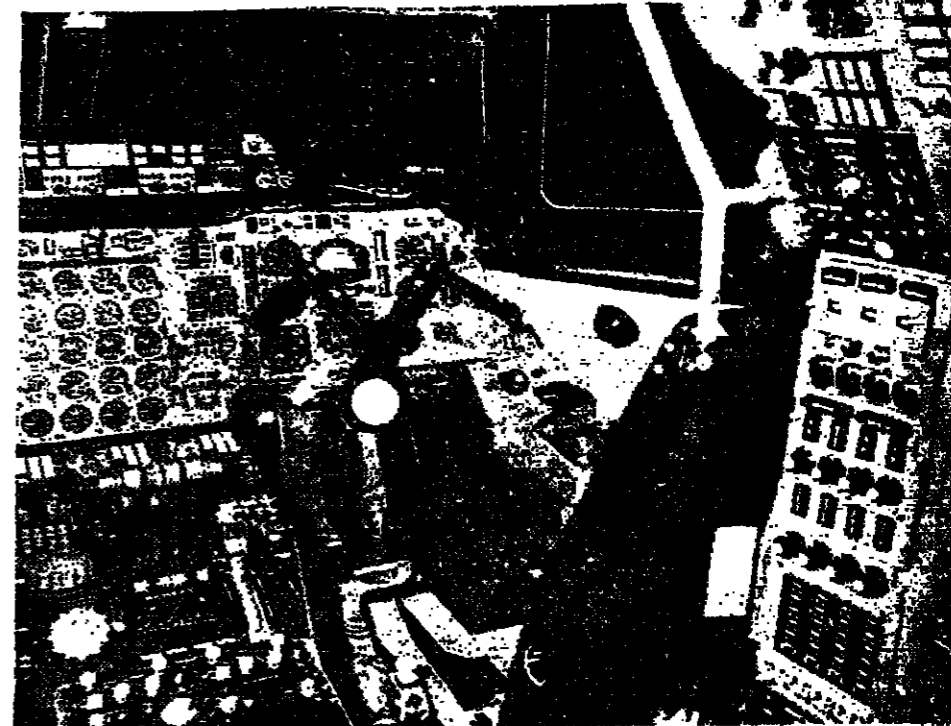
The aircraft remains in "max operating" mode throughout, being steered in azimuth between the selected waypoints and climbing steadily as the fuel consumption causes aircraft weight. Descent from supersonic cruise is again a push-button operation for automatic transition to a preselected altitude. Selecting this mode causes the instrument landing system to be engaged and guidance to the runway threshold is automatic. Flare out and landing take place automatically and reduce drag and fuel consumption. In such advanced cases, avionics can provide good stability and handling qualities with the centre of gravity position at a maximum for cruise. It can relieve structural loads and aero-elastic effects making for lighter, more efficient structure.

Flight control systems are installed in each of the two cockpits, each of which automatically identifies its own failures, either being capable of full control. Although they comprise 16 computer units, containing some 4,000 microelectronic circuits, the reliability has been shown to be consistent with modern airline operating requirements.

For the next generation of SSTs, avionics holds out exciting new prospects for even greater efficiency. Reductions in the volume of electronics and simplification of the cockpit can come from advances in airborne digital processors and displays, systems which the United Kingdom already exports extensively, notably to the United States. In addition, the latest advances in "fly-by-wire" techniques can help designers to simplify the airframe even further, notably by reducing fuel consumption. In such advanced cases, avionics can provide good stability and handling qualities with the centre of gravity position at a maximum for cruise. It can relieve structural loads and aero-elastic effects making for lighter, more efficient structure.

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Concorde's flight deck with push-button controller, part of its advanced avionics flight control system.

Pioneer automatic landing system

by R. H. Ashforth
Smiths Industries

The automatic pilot in the Trident is the major part of the Smiths Industries flight control system installed in one of Britain's most successful passenger aircraft. The Trident not only had the first automatic landing system of its kind but many of its features have since been adopted for the flight control systems of later types of aircraft. Both the Trident and the A300 Airbus incorporate the fail-safe concept which Smiths Industries pioneered in the early 1960s.

The company, in association with Hawker Siddeley and British Airways (then BEA), revolutionized the control concept for automatic landing systems and this was recognized by the granting, for the first time, of a Queen's Award for the design and development of an automatic landing system. From its inception, the Trident system included provision for the automatic acquisition of a selected height, a descent lock and a mach lock as well as the first application to a civil aircraft fleet of automatic engine throttle—features which are now taken for granted.

Since the original design the equipment has been developed to include a facility

for automatically maintaining the aircraft on the runway centre line during the initial deceleration after landing. (Control of the aircraft is handed back to the pilot as the speed reduces to 80 knots for him to complete the deceleration to a safe taxiing speed.)

It is 10 years since automatic landings were first flight-tested in a Hawker Siddeley Trident 1C at the Royal Aircraft Establishment, Bedford, and eight years since the same aircraft made headlines by landing in thick fog conditions at London (Heathrow) Airport when the other aircraft were grounded. So where is the Smiths Industries autoland system a decade later? The whole programme can be summarized as a positive progression towards the original goal that it should be 10 times safer landing automatically in fog than when the human pilot is making landings manually in clear conditions.

It is one thing to carry out automatic landings on an experimental basis with a specialized experimental crew, but an entirely different exercise to perform automatic landings with fare-paying passengers in an aircraft crewed by regular airline pilots. Before a passenger-carrying aircraft can land in thick fog the certifi-

cation authorities require proof that the operation is safe.

The significant milestones in the Trident low-visibility autoland programme have been as follows:

In April 1964 the Trident entered BEA service and automatic approaches to a height of 200ft above ground level with a forward visibility not less than 800 metres were allowed. The next year's certification was granted for autoland in clear weather and in November 1966 a practical demonstration was given at Heathrow of the Trident's ability to land in fog when the forward visibility was only 50 metres.

In January, 1968 the autoland weather minima were reduced to 100ft pilot decision height with forward visibility not less than 400 metres: this is known as category 2. After another three years of step-by-step proving, clearance was granted for automatic landings with a pilot decision height of 12ft and a visibility of 270 metres.

In the winter of 1973-74 the certification clearance for landings was lowered to a visibility of 200 metres called category 3A.

The present work programme is aimed at reducing the clearance to allow landings in category 3B con-

ditions with a goal of 100 metres forward visibility.

The three-year gap in the programme, 1968-71, arose because the certification authorities would not allow autoland until the category 2, 100ft "decision height" point until the ground-based instrument landing system (ILS) had the required integrity.

Clearance for landing in 100 metres forward visibility is confidently expected this winter. However, it is likely that this will be the end of the programme.

The autoland fitted to the Trident was for many years the most comprehensive of its type and is only now being matched by other autoland manufacturers in later aircraft. It made significant inroads into reducing pilot workload and hence increasing air safety. In fact the head-free paravision director (PVD) and ground speed and distance-to-go system developed for the Trident and manufactured by Smiths Industries have both been specified by British Airways for their L1011 TriStar aircraft.

Also the automatic flight control system of the A300 European Airbus has been developed and made with Smiths Industries as the United Kingdom partner company.

Manchester fleet's new equipment shines in fog

by Malcolm Moulton

The automatic landing system installed on British Airways' Super 1-11 fleet has had an outstanding first winter season since its clearance for use in low visibility conditions. Supplied by Marconi-Elliott Avionic Systems, a GEC-Marconi electronics company, the system is based on an E2000 autoland, in service throughout the world with many British and overseas operators.

With the Marconi-Elliott system, British Airways' 1-11 can approach and land under category 2 weather conditions, permitting regular operations down to 400 metres runway visual range—conditions which account for the great majority of foggy weather.

To date, the airline has carried out more than 6,000 approaches with the system, 31 of them in fog, when competitors have had to lose business by diverting to alternative destinations.

The Super 1-11 fleet is based at Manchester and provides an international short-haul service for most of Europe. Approximately half the fleet of 18 aircraft serves West German internal routes, including the passage through the famous air corridor to Berlin. The service thus provides valuable export business which,

aided by all-weather regularly, has enabled British Airways to increase profitability and capture as much as 40 per cent of the West German internal market this year, a record performance.

Marconi-Elliott Avionic Systems supplies the whole range of avionics systems which forms the heart of an airliner's all-weather landing system—as well as ground-based equipment for monitoring landing performance.

The on-board avionics systems consist of two main elements—guidance and control. The company supplies one or other of these elements for every British aircraft capable of all-weather landing.

The 1-11's automatic landing autopilot controls the aircraft's flight path and speed automatically from just after take-off until touchdown. This frees pilots from handling the aircraft's controls during most of the flight, enabling them to operate navigation and communication systems more effectively—an important factor in short-haul operations. Equally important are the means for acquiring selected height levels automatically under the direction of air traffic control.

The 1-11 system was developed by the company's flight controls division, working in conjunction with the British Aircraft Corporation and the engineering, operations and maintenance staff of British Airways. Success is due to accurate performance, reliability and extremely simple design. A single-channel monitored system, it automatically detects any failure during an approach, always enabling the pilot to take over control safely. Although this would not permit landing in completely blind conditions, it gives a very high level of all-weather regularity and safety, at a fraction of the corresponding cost of "blind operations".

Maintenance engineers responsible for the Super 1-11 report a high level of

serviceability with the system. They are backed by a support scheme, provided by the supplier's aviation service and repair division, which is proving highly cost-effective for the airline. The commercial benefits arising from category 2 operations are thus being achieved within normal levels of maintenance effort and cost, a fact that has won praise from the airline's management and staff.

Concorde's automatic landing system is based on the principles proved on the 1-11 but is a dual-monitored installation, capable of continuing an automatic landing despite any failure. It corresponds, in effect, to two 1-11 autopilots in the same aircraft and is engineered using advanced technology micro-electronics.

well ahead of the aircraft's entry into service.

The great speed of Concorde, which enables long-distance stages to be flown at frequencies characteristic of a short-haul airliner, makes the role of the automatic flight control system as important as that on the 1-11. Advanced operating modes are provided in keeping with the wide range of speeds and conditions encountered and airline pilots have praised the aircraft and its systems during evaluations under routine service conditions.

Supporting every aircraft's automatic landing operations are numerous ground-based electronic systems, including air traffic control radars and communications systems, airfield lighting and transmitters, ometers to measure visual range in fog. Marconi-Elliott Avionic Systems' special projects division has also produced a unique system which monitors the performance of every aircraft which lands on the instrumented runway at London Airport. Known as ALMS (aircraft landing measurement system), it has been installed by the Civil Aviation Authority to provide data which ensure the maintenance of the high levels of safety associated with all-weather landing.

Essential part of Trident's gear

The principal guidance element is the instrument landing system, ILS. The company's AD 270 ILS receivers, together with air-to-ground radio communication systems form an essential part of the Trident's automatic landing system. Control, on the other hand, is provided by automatic pilot systems which the company supplies for the Super 1-11, the VC 10 and Concorde.

Evaluations under service conditions

The flight controls division has worked in conjunction with SFENA in France in developing the system which is supplied jointly to Aerospatiale. The aircraft company responsible for Concorde's flight control. A considerable number of automatic landings have already been accomplished,

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Plessey actuators translate the pilots' commands into action and Plessey communications equipment helps maintain voice contact between ground stations and aircraft in flight. Routine servicing frequently involves both Plessey technicians and spares.

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THE POLICING OF ULSTER

Mr Merlyn Rees has been long enough in the job to know that if you drive down the middle in Ulster you get the bird from the dominant factions on both sides of you. So it is with his plan for strengthening police work in the province. It is a well thought out and much discussed plan for enlarging police manpower and introducing normal policing into areas which have been without it for years and in some cases decades. It has taken account of the fact that the Royal Ulster Constabulary is a highly charged element in the political symbolism of the province, and has tried to spare the susceptibilities of both communities. But it has already been denounced by spokesmen for the SDLP on one side and Unionists on the other as unacceptable or useless. Realism obliges one to conclude, with great regret, that its most likely fate is to join the lengthening list of fair-minded but abortive initiatives which Westminster has prepared for Northern Ireland.

That is a great pity, for more effective policing could bring ease to Ulster in two ways. If it is a key to the containment of armed subversion, an essential complement to the heavier hand of the military. The increase in the numbers being brought before the courts for terrorism offences shows that the RUC is undermanned as it is, managing to improve its effectiveness. But it still badly needs more

men and more cooperation, and recruitment from the Roman Catholic population. Better policing can also bestow the boon of civil order on those urban districts in the province where the functions of the police have been usurped by the squalor, intimidation and racketeering of illegal armies. By no means all the inhabitants of those districts are disaffected; many are the unwilling victims of lawlessness.

The political context into which the Secretary of State's proposals drop is one in which "loyalists" are demanding what they call a Third Force, a territorial militia distinct from the army and the regular constabulary, enrolled for the purpose of countering the IRA, while the SDLP are still stuck in the post-Subungale mud—no arrangements for policing the province will receive their approval or support that do not include the reconstruction of the RUC and some all-Ireland body with a supervisory role however tenuous.

The proposals themselves are such that, with the best of good will, they might be found to escape the main objections implicit in both those contrary positions. The police reserve would be locally organized and deployed, so that the local contingents could have a complexion appropriate to the community concerned. Better policing like most other improvements in the condition of Northern Ireland, is dependent on larger political decisions still to be taken.

police forces, but would at the same time be distinguishable from the RUC proper, thus allowing Catholics, who would not or dare not join the latter, to feel that this is something new in which they might be able to enlist. But, as has been said, that way of looking on the plan presupposes the best of good will on both sides, which is to presuppose the presence of something which is absent.

So the contribution which these proposals will make to the pacification of Ulster must be expected to be slight. Yet it is hard to see how better policing proposals could have been devised in the present state of frozen uncertainty into which the politics of Northern Ireland have fallen. It is no time to subject the RUC to the kind of reorganization which might, speculatively, win public endorsement from the SDLP. A Third Force of loyalist imagining, a sectarian and locally deployed counter-terrorist militia, probably would be the most effective auxiliary force, in a strictly operational sense—leaving out of account, that is, its political repercussions. But it too is quite incompatible with Westminster's policy, now becalmed, of holding the ring between the two communities and denying to both the full realization of their political objectives. Better policing, like most other improvements in the condition of Northern Ireland, is dependent on larger political decisions still to be taken.

That is why their activities are so disturbing, and why the reaction to them of the political parties is at present so inadequate. Both the leaders and the members of these bodies are clearly well-meaning patriots as sincerely concerned to help their country in its trials today as they or their fathers were 25 years ago. But their good intentions are not matched by any comparable understanding of the real social and political problems confronting us; much less of the extent to which they, by their own actions, are likely to add to them.

If these problems are not to increase, it is vital that politicians of all three major parties should avoid approaching them in the partisan spirit shown by Mr Roy Mason; and it is particularly necessary that the Conservative leaders should dissociate themselves from these bodies in a very marked manner indeed. A joint declaration by the heads of all three parties affirming their confidence in the traditional organs of government and their disapproval of any private bodies, whatever their political complexion, being formed to supplement or displace them, might do much to persuade the uncertain that the centre is holding; that consensus is not collapsing; and that the remedies being peddled by General Walker and others will only exacerbate the disease they are trying to treat.

Voluntary international control is never fully effective simply because there is always an irresponsible minority who refuse to accept its authority. However the World Medical Association (meeting this week in Stockholm) has been able to achieve wide adherence to its code of ethics on human experimentation and the weight of international opinion can be persuasive. Unlike nuclear physics molecular biology does not require elaborate laboratories or expensive raw materials so that external control is virtually impossible. Voluntary monitoring by the scientists themselves seems the only answer and the chance to establish a credible system should be taken at the international conference to be held early next year.

without the supra-national political institutions to control them. The Italians have recognized this, almost grovellingly with gratitude for Herr Schmidt's largesse and hailing West Germany as the new guiding force of Europe. M. Giscard d'Estaing has so far avoided such indignities, and is running fast to keep the political initiative in his own hands. But he has no illusions that anything can be achieved without full West German support—as last night's tête-à-tête dinner in the Elysée implicitly confirms.

Almost certainly they will have agreed that the political strengthening of the Community is an urgent matter which will not easily wait on the political priorities of the Labour Party. It would be interesting to know whether they favour the same type of political strengthening as the Liberals, who want more power both for the Commission and for a directly elected European Parliament, and less power for the Council of Ministers. Perhaps not. But they may well have reflected privately as Le Monde has implied publicly that the proposed summit would have a better chance of success if the British Government represented at it is of a different political colour from the present one.

Like the French President again, the Liberals appear to have grasped the all-important fact that leadership in the next stage of European development must come from West Germany or from nowhere. "The German Government", they write, "has understandably become reluctant to continue as the paymaster for a collection of states who say they want common policies but

We do not therefore feel that the 12 weeks of vacation we are allowing at Buckingham, if properly used, should produce any less in the way of serious study in vacations. The staff does not come into it, as we have never suggested that the staff teach to all four terms. But the issue is not really one of the right length of degree courses upon which reasonable men will agree to differ. It is whether a body of highly experienced University teachers should be allowed without expense to the taxpayer to experiment in this and other aspects of higher education, or whether they should be prevented from so doing by the arbitrary veto of a body on which University teachers are in a minority. Yours truly, MAX BELOPP, Principal, The University College at Buckingham, c/o All Souls College, Oxford.

profit from apples From Mr James Reeves Sir, A friend of mine with a fruit farm in Sussex tells me that he is selling his crop of an early apple at 7p a pound to shops which retail them at 12p. The farmer's own van is used to deliver the apples direct to the shops, so that there is no middleman. It would be interesting to know two things: (1) Is this rate of profit considered reasonable? (2) Does the same rate of profit apply to all fruit and vegetables, and, if so, would this explain the present inordinate prices in the greengrocer's shops? Yours faithfully, JAMES REEVES, Flint, Rotten Row, Lewes, Sussex, August 23.

Reactions to weak government

From Professor Michael Howard Sir, Your leading article of August 24 was timely. Experience tends to show that advanced industrial societies in a condition of chronic economic and political crisis are liable, not to military coups, but to a polarization of the community between Left and Right, with each side forming its own private bodies to counter those of the other since neither any longer trusts the Government to do its job of ensuring both social justice and political order.

Not only the Weimar Republic but the French Third Republic and to a certain extent post-1918 Italy are cases in point. Under such circumstances the Army can be relied upon to remain loyal to the Government, but the Government may sympathize with the objectives of the party in power. The trouble with "coup" bunters, to whose comments even you have recently given rather rash hospitality, is that, in devising unrealistic scenarios based on exotic models such as Greece or Chile, they ignore the no less sinister pattern of events in societies very much more closely akin to our own.

There is no reason to expect that the situation here, formed by such factors as General Walker and Colonel Stirling will be as militarized as the German Freikorps, nor so politically fertile as the comparable French movements of the 1930s; but they could, in a purely British way, be just as dangerous. Better policing, like most other improvements in the condition of Northern Ireland, is dependent on larger political decisions still to be taken.

That is why their activities are so disturbing, and why the reaction to them of the political parties is at present so inadequate. Both the leaders and the members of these bodies are clearly well-meaning patriots as sincerely concerned to help their country in its trials today as they or their fathers were 25 years ago. But their good intentions are not matched by any comparable understanding of the real social and political problems confronting us; much less of the extent to which they, by their own actions, are likely to add to them.

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Pop festivals and the law

From Dr Alan Glyn, Conservative MP for Windsor and Maidenhead Sir, Now that most of the publicity has died down it seems that the time has come for reflection on the subject of the Windsor Pop Festival. This is the third year that the festival has been held on the cavalry exercise ground in Windsor Great Park. From its inception I have been opposed to the holding of this function and have made my views clear to the authorities concerned.

Windsor Great Park is enjoyed by many people from all over the country and some 700 visitors every day enjoy the stretch of park off the A332 where they can park their cars, picnic, and if they wish, walk through Windsor Park.

The pop festival deprives these people of the enjoyment of the park for the period it is in operation and for some days afterwards when clearing-up operations have to be carried out, which are particularly difficult when it is appreciated that there is no sanitation available. The rules of the festival, which have just been approved by both Houses of Parliament, are designed to prevent camping and the lighting of fires. These rules enable regular visitors to enjoy the amenities of the park and, at the same time, make a pop festival illegal.

If an individual erects a tent or lights a fire, thereby breaking the park regulations, this constitutes a criminal offence. But because six to eight thousand fans broke the law, then under existing rules it is difficult to prevent it. At some stage or other it must inevitably result in a head-on collision between the authorities and the fans and there is no doubt that a small element of militant people is responsible to a large extent for stirring up other demonstrators to take physical action against the police. This type of festival provides a magnet for drug pushers and causes many young people who have hitherto escaped the lure of drugs to become involved. There have been about 200 prosecutions for this type of offence. In three years my experience is that the police have exercised considerable restraint in spite of severe provocation.

The employment of six to seven hundred police during the period of the festival, with expensive wireless and telephone equipment, represents an unreasonable burden on the ratepayers for the holding of an illegal activity. It is quite wrong that because of their numbers these fans should be allowed to break the law and I have suggested to the Home Secretary that means should be found for ensuring that Windsor is not subjected to this event next year. Temporary closure of the road may be necessary and a considerable force of police employed at the site to set to make sure that they do not infiltrate the Long Walk or other parts of the park. It has been suggested in some quarters that the Commissioners should provide facilities for the festival. This would mean that 8,000 people have blacked out their windows and submitted themselves to the glare of the sun. Even in these days of permissiveness, this should be resisted.

I do not envisage the necessity for a special Act of Parliament but rather the strengthening of the existing park regulations if that proves necessary.

The final decision is a political one. From Dr Martin Cuthbert Sir, I read with interest Dr William Sargant's article of July 30 and the replies to it so far published in *The Times*.

Dr Le Gassicke (August 12) makes, I think, a plea to the Department of Health and Social Security not to pursue so rigorously its policy of (in effect) model "dissolution of the Monasteries": I should like to support this as there is still a great need to continue to provide true "asylum", updated and modernized both in structure and in content, for the mentally ill and successfully undertake widely and indefinitely continuing care.

I make this assertion from two spheres of experience. First as a Consultant Psychiatrist practising for 25 years in another area of North Eastern England from that of Dr Le Gassicke, when in a psychiatric hospital located within an industrial conurbation and serving 330,000 persons, we found that in the years 1967 to 1972 inclusive, we were re-admitting finally (though informally) from 11 to 13 chronically ill persons in the age range of 35 to 45 years. Each of these had been supported in the community for eight to 10 years and each had received all the appropriate methods of treatment—physical (including medicinal), social and where possible psychological—and despite all had deteriorated mentally and to some extent also physically, to the point at which each clearly required the intensive and continuing support of a structured though not custodial environment: each had a life expectancy in the region of 30 years.

Secondly, in the course of my present professional activities, outside the National Health Service, I have opportunities to observe some of the effects of DHSS practices and policies from the "consumer angle": this experience is often far from reassuring, particularly so in the cases of those younger chronically mentally ill who have been allowed to discharge themselves (or who

one and, whichever party is called upon to make this decision, I hope it will take into consideration the importance of the preservation of law and order and not the dictates of mob rule. Yours faithfully, ALAN GLYN, House of Commons, September 2.

From the Rev F. R. Welbourn Sir, At 6.30 am on Monday (August 26) four lads from Teasdale were sheltering under a tree in Windsor Great Park. They had arrived, as hunch-bikers, six hours earlier, just as the rain began, protected only by the sleeping bags and a little polythene. They were soaked to the skin and immensely cheerful. This was their festival and it was free. It was an expression of what Professor V. W. Turner (*The Ritual Process*, now available as a Penguin) has called communitas—an experience of spontaneous equality and mutual tolerance which is basic to growth in a free society. Such events must be not merely tolerated but encouraged and given the minimum of social control which does not arise out of the festival itself.

To start with, there were no lawns and no water supply nearer than Windsor. But there was a highly responsible attempt to prevent litter and (by the majority) to preserve natural beauty. By the minority there was provocative abuse of the "pigs". But for the two days I stayed, the police were few in numbers and immensely helpful. They had, of course, to enforce a questionable law about drugs. They had (rightly) to prevent the theft of fencing and green timber for firewood. But, to any who asked for help or advice, they gave cheerfully. There was no suggestion that to the festival was illegal. Nor did the majority who attended the festival know that it was so.

The police may have been seen as a threat to drug takers, but not to the festival itself. If it was indeed (in your words) "unquestionably illegal", it is that aspect and not the aesthetic objections of the local inhabitants (some of whom were openly enjoying the occasion) which should have been widely publicized beforehand. More importantly, it should have been scolded from the start—before the lengthy task of erecting the scaffolding for the stages; before the medical aid, Released marquees were pitched; before the first small tent appeared; before the local traders began to draw huge profits from the sale of hamburgers and ice cream and drinks.

Perhaps fortunately, I left on Monday morning. But it is difficult not to agree with your view that "many people may today be nursing a disillusionment that will not fade rapidly"—a disillusionment which is properly directed not against the police but against the Crown Estate Commissioners who did not take action in time. Which political party will have the courage and the social wisdom to include in its manifesto the determination that free pop festivals, of the young, for the young, by the young, will receive every encouragement and the minimum of bureaucratic control? Yours, etc. F. R. WELBOURN, 45 Berkeley Road, Winterbourn Down, Bristol.

have been encouraged to leave hospital) while still incompletely treated and usually in a state of almost total irresponsibility. Many of these are living in squalor, drifting aimlessly and unattached to moral social degradation; others just maintain a form of life, but in almost total isolation within the ambit of a family pressurized unwillingly to accept the unwelcome prospect of providing their own support by social or hospital care services, the onerous task of indefinite continuing care.

There are, of course, other groups of disabled, injured and handicapped people for whom, at the moment, no adequate provision is available. I also see many of these and appreciate their need of help: often they have never had proper facilities, but the chronic mentally ill have had for well over a 100 years had "asylum". Why seek now to destroy them, especially when it is being improved out of all recognition and linked with modern social and other therapeutic activities such as Industrial Rehabilitation?

Is there any other provision for this group exists and this brings me back to Dr Sargant. The psychiatric departments of the teaching and the district hospitals are rightly praised for the excellent work they do and the standards of treatment which they provide, but they do not, perhaps, provide for the long-term chronic mentally ill persons, who, as Dr Le Gassicke points out, "will require treatment for the rest of their lives"—or until Dr Sargant's pharmacists can provide a new "milk".

In the meantime perhaps we should remember The Bathwater and The Baby. Yours truly, MARTIN CUTHBERT, 5 Holme Lane, Seamer, Middlesbrough, Cleveland.

The Jesuits today From Father John Tracy, SJ Sir, Your Religious Affairs Correspondent (August 29) thinks that the fourth vow of obedience to the Pope made by some Jesuits could, if understood strictly, be taken as an infringement of the rights of conscience. I fail to see this, however strictly the vow is understood. A vow cannot be taken other than freely. A vow of obedience cannot oblige against the dictates of one's conscience. This is elementary doctrine in religious life. I would not quarrel with the judgment that the deficiencies of the Society of Jesus have become apparent. Nor would I deny the urgent necessity for the society to adapt itself to meet modern needs and conditions. But I would argue that

Black universities in South Africa

From the Chief Minister of Gazankulu Sir, Professor Mathibha's letter (August 28) raises an important point. We need the understanding of British Universities to help our black universities in South Africa. We need university exchange staff; we need books; and we need scholarships for post-graduate students and for teachers to be trained in the teaching of English.

It does not seem to have been understood in Britain that the Homelands have, contrary to the preference of the South African Government, chosen English as the medium of instruction in the schools. It is something that having given us the choice Mr Vorster, with whom we are now able to have direct discussions, has honoured our decision.

Is the hesitation of British universities partly due to the fear that if they help us they will in some way appear to support the policy of apartheid? We wish to make it abundantly clear that we do not support apartheid. But we are realists. We want to help our people find jobs, education and a better quality of life. As elected leaders, we are in a position to voice the aspirations of our people. The present policy has provided us with a platform, and we are able to have direct access to Mr Vorster.

There are certain types of aid, which only Britain can give. Is not educational aid in the teaching of English and the improvement of our universities a clear opportunity?

I am totally opposed to the policy of despair which says that the only way to help the blacks in South Africa is to cut off all investments, give no aid, and encourage violence. The chief sufferers will be our people. It is, as Chief Buthelezi puts it, "a nice attitude to wash one's hands of South Africa, but it does not help the black people if Christians in Europe act like the Pharisee of the Bible."

The fact that a number of changes are taking place. We are looking for instruments of change to hasten this process. We are not apostles of apartheid, but champions of change. We need help from Britain for the change to be carried through in the right way. Yours faithfully, HUDSON NTSANWISI, Chief Minister of Gazankulu, 45 Berkeley Square, W1.

Regional orchestras

From Mr Thomas Russell Sir, Since your columns have given space recently to a variety of opinions on the problems of the symphony orchestras of London, may I pose a supplementary question?

In a brochure published by one of the four London orchestras the reader is asked: "Why support a national orchestra? (as opposed, for example, to a regional orchestra)?" Without searching my mind for what may be the other examples, I ask simply what can be the foundation for such an opposition. In what way is an orchestra based on London "national" while the others, the lesser breeds without the law, merely "regional", a title with a pejorative inflexion? The document in question provides a number of replies to its own question, but in every respect except one the same answers could be made to "Why support the regional orchestras?" The one exception is worthy of remark. It says: "The national orchestras are all London based."

Am I alone in regarding this as nonsense? Yes, London is the capital city, but, like all capital cities, less typical of the nation than the working regions. It may be, as asserted, the cultural centre of Europe, but there are other cultural centres in this country, too. They also command hundreds of thousands of visitors each year. The document in question claims for London: "Come to the town with whose regional orchestra I am connected and from the lack of English spoken in the streets you would realize that, population for population, it has as high a percentage of visitors as London, and many support the orchestra during their stay."

Then, we are told, "the best players are in London". Not all of them, I would say, while some are already moving out to escape from the jungle of orchestral warfare in the capital. Such arguments fail to persuade me, not because I am now resolved with the London orchestra; I insisted in print years ago when with a London orchestra that to live in London did not presuppose a higher cultural perceptiveness, although it might connote a higher appreciation of money value.

The only property constituted orchestras in the United Kingdom are outside London, where the players work hard for lower salaries than their London confreres, spending the greater part of their time in wearisome journeys over a vast region of many counties. They also play in London from time to time and occasionally tour abroad. If they claimed to be national orchestras one might be inclined to concede the claim.

Not until the London orchestras give close consideration to the relevant clauses of the Peacock Committee Report shall we have anything approaching what might be termed a national orchestra. In the meantime, may I suggest that the word London offers an adequate title to any of its products, and avoids capital city chauvinism. Yours faithfully, THOS A. RUSSELL, 4 MacLaren Road, Bournemouth.

Fiddletrethide et al

From Mr Doby Meller Sir, Mr Trevor Jones (Letters, August 30) has only to cross the border into Somerset to find village names just as evocative as those in Dorset. Wyke Champflower, Chilton Castle, Huish Episcopi, and Upton Nob, are all within a few miles of my own village. Yours faithfully, DIGBY MELLER, The Barton, Gaimhampton, Nr Yeovil, Somerset.

THE LIBERAL VIEW OF EUROPE

The Liberal Party policy statement on Europe is a refreshing document. Not because it contains any imaginative new proposals but precisely because it is an unashamed re-statement of well-known Liberal themes which are not what the electorate is generally supposed to want to hear at this moment. At least on any one issue is not trying to hedge or be all things to all men. Wherever other sources of Tory disorientation they hope to tap, the Liberals are not bidding for the anti-Common Market vote.

Of course that does not mean that they think all is for the best in the best of all possible Communities. That has never been their view, and today it can hardly be the view of any European politician. They recognize that, in the past year we have seen the Community at sixes and sevens over regional policy, monetary policy, energy policy, agricultural policy and foreign policy. They admit to wanting a "radical change in the Common Agricultural Policy" which would in effect amount to its replacement by a system of direct subsidies to farmers. They want the Community to lower its tariff and non-tariff barriers to trade, and they support Mrs Hart's attitude to trade

and aid "particularly with regard to Asian countries". They regret that the regional fund has not yet been established.

But the Liberals remain convinced that "the root cause of most of the trouble is not that political integration has gone too far, but that it has gone far enough". On this point they clearly agree with President Giscard d'Estaing, and they evidently agree too with his hint that Britain should not use her internal problems as an "alibi" for not joining in the work of political integration. For while they seek "as wholeheartedly as anyone else" some of the changes which the Government wants, they severally criticise it for showing "a complete absence of vision or idealism where the Community is concerned" and for not understanding the long-term aim of political union.

Like the French President again, the Liberals appear to have grasped the all-important fact that leadership in the next stage of European development must come from West Germany or from nowhere. "The German Government", they write, "has understandably become reluctant to continue as the paymaster for a collection of states who say they want common policies but

University degrees

From Professor Max Beloff Sir, Your correspondent Dr W. P. Maret (August 28) raises the question of vacation, reading as an important argument against our proposed two-year course. His picture of the current scene may perhaps be over-optimistic. The interim report of the Hale Committee published by the UGC found the situation "unsatisfactory", noting that more than half the students surveyed did one hour or less of academic work per day during their long vacation. Eighty-four per cent did less than three hours.

It is true that these figures were published in 1963 but I know of no recent more optimistic statistics. And it is also the case that students may (and in many cases do) register with labour exchanges at the beginning of each vacation, thus suggesting that they are free for full-time employment.

We do not therefore feel that the 12 weeks of vacation we are allowing at Buckingham, if properly used, should produce any less in the way of serious study in vacations. The staff does not come into it, as we have never suggested that the staff teach to all four terms.

But the issue is not really one of the right length of degree courses upon which reasonable men will agree to differ. It is whether a body of highly experienced University teachers should be allowed without expense to the taxpayer to experiment in this and other aspects of higher education, or whether they should be prevented from so doing by the arbitrary veto of a body on which University teachers are in a minority.

Yours truly, MAX BELOPP, Principal, The University College at Buckingham, c/o All Souls College, Oxford.

Profit from apples

From Mr James Reeves Sir, A friend of mine with a fruit farm in Sussex tells me that he is selling his crop of an early apple at 7p a pound to shops which retail them at 12p. The farmer's own van is used to deliver the apples direct to the shops, so that there is no middleman. It would be interesting to know two things: (1) Is this rate of profit considered reasonable? (2) Does the same rate of profit apply to all fruit and vegetables, and, if so, would this explain the present inordinate prices in the greengrocer's shops?

Yours faithfully, JAMES REEVES, Flint, Rotten Row, Lewes, Sussex, August 23.



COURT CIRCULAR

BALMORAL CASTLE
September 2: The Prince of Wales, attended by Squadron Leader David Checkers...

KENSINGTON PALACE
September 2: The Duke of Gloucester, as President of the East Midlands Tourist Board...

Princess Anne, president of the Save the Children Fund, will attend its annual meeting at Queen Elizabeth Hall...

Luncheon
Property Services Agency
Mr John Cuckney, Chief Executive...

Latest appointments
Mr J. G. Cuckney, chief executive of the property services agency...

Latest wills
VC hero of 1914-18
War leaves £7,834

Coachmakers' Company
The Election Court of the Coachmakers' and Coach Harness Makers' Company...

Birthdays today
Dame Elsie Abbot, 67; Sir John Brocklebank, 59; Sir Macfarlane Burnet, 75...

£75,000 Premium Bond prizewinner
The £75,000 premium bond winning number is 8 YL 72924.

Forthcoming marriages
Mr J. J. Harrison and Miss J. E. Harrison
The engagement is announced between Geoffrey James, elder son of Mrs M. J. Harrison...

Mr M. Blake Watkins and Miss T. M. Fyler
The engagement is announced between Michael, son of Mr and Mrs H. J. Watkins...

Mr E. S. Dunnett and Miss J. C. Perry
The engagement is announced between Edward, only son of Mr and Mrs J. S. Dunnett...

Mr W. F. Gelson and Mrs J. A. Dear
The marriage has been arranged and will shortly take place between William Francis, elder son of Mr W. F. Gelson...

Mr I. S. Lockhart and Miss R. Cartwright
The engagement is announced between Ian Stuart, only son of Mr I. S. Lockhart...

Mr R. M. M. Orr and Mrs M. R. Bloss
The engagement is announced between Robin Orr, of 9 Valley Road, Bromley...

Mr D. C. Parker and Miss K. Beaumont
The engagement is announced between David, son of the Rev Dr T. H. L. and Mrs Parker...

Dr M. H. Seifert and Dr J. E. Morris
The marriage has been arranged and will shortly take place between Martin Howard, son of Dr and Mrs V. M. Seifert...

Mr P. J. Stockley and Miss F. Jones
The engagement is announced between Philip James, son of Mr and Mrs J. Stockley...

Mr E. S. Tudor-Evans and Miss D. S. Boyce
The engagement is announced between Edward Simon, son of the late Mr A. G. Tudor-Evans...

The marriage arranged between Lord Nigel Newby and Miss Georgina Bailie Hill will not take place.

Coachmakers' Company
The Election Court of the Coachmakers' and Coach Harness Makers' Company...

Birthdays today
Dame Elsie Abbot, 67; Sir John Brocklebank, 59; Sir Macfarlane Burnet, 75...



The memorial to Mr Nikita Khrushchev in the Moscow cemetery where the former leader's son, Sergei, stands after helping to erect it yesterday.

Marriages
Mr H. C. Roney and Miss A. P. Cloudeley Seddon
The marriage took place at Chelsea Old Church on Friday, August 30, between Mr Henry Charles Roney...

Mr I. G. Williamson and Miss E. J. Carbery
The marriage took place on August 31 at the Church of the Immaculate Conception...

25 years ago
From The Times of Friday, September 2, 1949
From Our Own Correspondent
New York, Sept. 1: Six veterans of the American Civil War...

Receptions
Department of Energy
Mr Varley, Secretary of State for Energy, was host at a reception held at the Hyde Park Hotel...

Science report
N Ireland: Science in troubled times
According to an article in Nature, the practice of science in Northern Ireland is becoming harder than elsewhere...

Museum officers urged to get rid of trash
By Gavin Scott
The Times Educational Supplement
Museums are too much like 'high-class trash cans'...

Beef report predicts glut then shortage next year
By Our Agricultural Correspondent
A beef market glutted in the early spring of next year by unfinished animals...

Thousands pay homage to Mr Kirk
From Our Correspondent
Wellington, Sept 2
The body of Mr Norman Kirk, the New Zealand Prime Minister...

Leader to visit Chile for church youth
From Our Own Correspondent
Paris, Sept 2
Brother Roger, the Swiss Protestant priest who led the Catholic Community in Burgundy...

Brussels thanks the Welsh Guards

From Roger Berthoud
Brussels, Sept 2
Thirty years ago today the Welsh Guards—part of the Guards' Armoured Division—crossed from France into Belgium...

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OBITUARY
MR GEOFFREY HUNT
Editor at Oxford University Press

Elizabeth Knight writes: The religious books editor of the Oxford University Press, Mr Geoffrey N. S. Hunt, died suddenly on September 3, 1974...

DR. A. R. LEE

Sir William Glanville writes: Few of us as road users know of the debt we owe to Dr Alfred Robert Lee...

MR NORMAN KIRK REAR-ADMIRAL L. S. HOLBROOK

Mr David Frost writes: On arriving back in London I was before long aware of the death of the Rt Hon Norman Kirk...

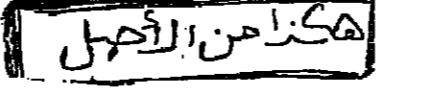
MR JACK FROST

Mr Jack Frost, who was Shipping Correspondent of The Daily Telegraph for 27 years, has died at the age of 75...

MAUREN DYSON

Maureen Dyson, the British hurdler, died at Southampton yesterday after a long illness. She was 45.

Fly TAP to Madeira for under £6 a day. There's still time to catch the sun in '74. 14 days in Madeira from only £79 for self-catering holiday or from £148 demi-pension. And that includes travel-without-tears flights by TAP international scheduled airliner from Heathrow...



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THE TIMES

BUSINESS NEWS

SKF
 world leader in rolling bearings
 SKF (UK) Limited

17 oil companies link up to build £200m pipeline network to Shetland

By Roger Vielvoys
 Energy Correspondent

More than half of Britain's oil requirements in 1980 could be flowing from a single undersea pipeline linking five large oilfields in the northern part of the North-Sea to the Shetlands.

Seventeen oil companies from five separate exploration groups yesterday signed an agreement for joint participation in a £200m transportation network to get the oil ashore.

Mr Peter Barandale, a managing director of the Royal Dutch-Shell Group, one of the oil companies involved, gave a warning that government participation in the North Sea development of the newly found offshore oil riches.

Mr Barandale said the Government had not discussed participation in the pipeline. On the Government's proposals for taking a 51 per cent share in the pipeline, he said he could see no way in which participation by Whitehall would speed up North Sea development and he was worried that it might slow down operations.

His concern about the slow-down in development work stemmed from the difficulty that the British National Oil Corporation would find in setting up a fully competent technical body that could operate on equal terms with their oil company partners.

Oil groups were well aware of the difficulties since they were competing among themselves for the small band of expertise with the experience and knowledge to undertake North Sea development work.

Mr Barandale emphasized that he was expressing the views of Shell and not necessarily other North Sea companies. He also felt that government intervention might slow down the search for the smaller oilfields that would be needed to keep Britain self-sufficient in oil once the bigger reservoirs were past their peak.

The five oilfields that will be providing a million barrels of oil a day by 1980 are Brent (Shell/Esso and Texaco) after which the whole transportation network has been named; Cormorant (Shell/Esso), Duzell (Shell/Esso and Conoco), National Coal Board; Thistle (Signal Oil and Gas and Conoco/Gulf/NCB); and Hutton (AMOCO/Gulf Council and Conoco/Gulf/NCB).

Brent, the biggest of the fields, will begin producing through a temporary offshore loading terminal early in 1976. Work on the pipeline is due to begin next spring and should be completed later in 1976.

Initial production through the 93-mile-long 36-inch diameter pipeline is expected to start at about 300,000 barrels a day.

Oil from four of the fields will be piped separately to the Cormorant field, the most westerly of the finds, and then pumped through the main line to Sullom Voe where £80m is being spent on terminal and reception facilities.

The £80m will cover the facilities that will be used exclusively by the five companies using the Brent system. Zetland County Council will build and own other storage facilities, tanker jetties and operate the port.

State boards disagree over Bacat charges

By Peter Hill

Two nationalized undertakings are locked in dispute over the operation of the barge-boat-cannaman (Bacat) service between Hull and Rotterdam which is already the subject of an unofficial blacking by 2,000 dockers at Hull.

The British Waterways Board, which is involved in the operation of the service with Bacat (UK) has lodged a joint submission with the National Ports Council over the charges being levied on the service by the British Transport Docks Board.

It is expected that the National Ports Council will now have to convene an inquiry into the dispute under Section 31(2) of the Harbours Act, 1964.

The service, which cost £2m to establish seven months ago, involves the use of barges, which are loaded at canal ports in south and west Yorkshire and then pushed by tug-boats to Hull for loading on board the mother ship at a riverside berth at Hull.

The service saves both cost and labour and has been handling about 5,000 tons of cargo every week to the Humber and Rotterdam.

According to the BWB, the docks board has decided to levy dues on the Bacat barges, which do not require a crew and do not have their own engines, as though they were seagoing vessels. This definition is strongly disputed by the BWT and by Bacat (UK) which claim that the BWT barges should be subject to the same charges as are applied by the BTDB to other inland waterway craft.

The BWB also claims that the board is levying a charge on the loading of barges on board the mother ship—on the basis that the barges are, in fact, goods. The Waterways Board considers that, if a charge is to be made, it should be on a different basis.

Shop stewards at Hull yesterday issued their first blacklist of 13 vessels that the stewards claim have close connections with the Bacat service. The river craft named in the list are operated by the BWT, General Freight Company and Trent Wharfrage.

The Bacat ship is at present in dry dock but is scheduled to return to Hull next Monday for the first time since the blacking was implemented.

Closure, opposed: Trade unionists at Barrow-in-Furness decided yesterday to oppose the decision to close the town's port which was confirmed yesterday by the BTDB. The docks have lost more than £1m since 1963 and suffered a drastic loss of traffic after the closure of the local iron works.

£10m dispute ends after Chrysler's pay deal

By Clifford Webb

There was good and bad news yesterday for the 30,000 men and women in the strike-plagued motor industry. The strike by plastic workers which has stopped all production of Chrysler cars and cost the company an estimated £10m, was called off.

But a mass meeting at British Leyland's Washwood Heath transmission factory voted to continue the 10 day dispute which has halted output of all Austin-Morris cars except the Maxi.

The 200 men on strike at Chrysler's Coventry plastics factory for the past three weeks voted overwhelmingly to accept a new pay offer. It raises the previous offer of 4.75 per cent to 5.5 per cent for 12 months.

The strikers had demanded £4 a week more than the company's original offer to give them immediate parity with workers at Chrysler's Coventry assembly plant. The company has promised parity throughout the United Kingdom by 1976.

Production of the plastic components used on all Chrysler cars resumed immediately after the return to work yesterday. A company spokesman said there would be a phased recall of the 9,500 workers laid off at the Ryton, Coventry and Linwood, Reddleshire, car assembly plants. But it would be some days before they were all back at work.

British Leyland now face the prospect of more lay-offs to swell the 16,500 already idle at Longbridge, Cowley, Castle Bromwich, Swindon and Luton. The company is representing the 2,000 transmission workers on strike are meeting management on Thursday to try to press again for an increase on the £4 a week offer.

The company has so far rejected a suggested approach to the Government's arbitration and mediation service because it believes it is too early for outside intervention.

There was better news of a smaller strike within the group. Eighty inspectors at the Alvis military vehicle factory at Coventry voted to end their two-week strike which has made a further 1,500 workers idle. The stoppage also threatened production of Rover 3500 models through lack of engine components.

Raymond Fernan writes: The industry is now effecting the motor industry now seems likely to spread to Ford, which faces the threat of a work-to-rule by craftsmen in support of an unofficial claim for £5 a week more.

This demand was made yesterday when Ford officials and union negotiators attending the TUC congress at Brighton. The skilled man claim that their differentials over production workers have been eroded from 22.3 per cent in 1969 to 11.8 per cent at the beginning of this year. They want an instant payment now. A mass meeting of the 1,600 skilled workers at Halewood has already voted to work-to-rule from September 16.

Abu Dhabi deadlock on participation

Abu Dhabi, Sept 2.—Abu Dhabi and foreign oil companies have failed to reach agreement on increasing the Gulf Emirate's share in the companies' operations here.

The negotiations, which began two days ago, centred on pricing an accord signed in 1972 giving Abu Dhabi a 25 per cent share, rising to a controlling level of 51 per cent in 1981.

Mr Maha Otaiha, the Abu Dhabi Oil and Finance Minister said today: "We cannot accept their terms, as we have a duty to protect the interest of our people."

The daily newspaper *Al Wahdah* meanwhile reported Abu Dhabi wanted a 60 per cent holding in the oil industry. The paper quoted Mr Otaiha as saying this would be a first step, as his country intended to take full ownership of the companies eventually.

This is the second time negotiations between the two sides have hit a deadlock. They had held five sessions in July but failed to agree.

Britain's sea search: The French government is expected to award its first permit for oil exploration off the Brittany coast within six weeks, a spokesman for the state-owned Elf-Erap Oil Co said in Paris yesterday. The permit would cover an area of 30,000 square kilometres (19,300 square miles).—Reuter.

Mr Shore visits Venezuela after Brazil talks

Caracas, September 2.—Mr Peter Shore, Britain's Trade Minister, met with Venezuelan government officials this week to discuss increasing trade between the two countries.

Mr Shore arrived from Brazil, where he held similar discussions with Brazilian government officials. He said the main purpose of his trip is to seek ways of increasing the economic relations between Britain and Venezuela.

Mr Shore was due to meet Singor Efraim Schacht Aristeguieta, and the Foreign Minister, and Senator Manuel Perez Guerrero, Minister of State for International Trade relations, today.

He is also invited to visit Venezuela's steel industry tomorrow, and on Wednesday Minister and Minister of State for Planning and Development.—AP—Dow Jones.

£2.8m share for San Paulo in compensation

San Paulo (Brazilian) Railway yesterday estimated that its share of the £4.3m compensation for nationalization agreed by the Brazilian Government to settle claims from six British companies would amount to 93p a share or almost £2.8m. This will be increased by 75 per cent of the investment currency premium applicable to the sum.

Financial Editor, page 17

Mr Benn affirms top priority for takeover of Court Shipbuilders

By Peter Hill and Maurice Corina

Mr Anthony Wedgwood Benn, Secretary of State for Industry yesterday brushed aside Conservative threats to denationalize the shipbuilding and associated activities of Court Line.

Amid rumours that suppliers to the shipyards are becoming restless about their bills, his department issued a joint statement with Court Line's special manager, Mr Rupert Nicholson, affirming that a sale to the Government is being given top priority.

The aim is to conclude a deal before the next General Election which has been an important factor in creating uncertainty among suppliers as well as the 9,000 workers employed by Court Shipbuilders.

In their statement, the Government and Mr Nicholson said that detailed negotiations were now in progress for the purchase by the Government of the Court Shipbuilders Group.

"All the parties are negotiating with a view to the speedy conclusion of an agreement," it continued. "The objective is to submit for the approval of the court a scheme which would result in the Department of Industry acquiring as going concerns all the shipbuilding, ship-repairing, and associated companies in the Court Shipbuilders Group."

No details were given of any revision of Mr Benn's original—and now obsolete—formula for the takeover, which involved a consideration of £16m and a re-arrangement of various loans. Work within the department had advanced considerably before the collapse of Court Line.

Behind yesterday's statement is the need to reassure suppliers of materials and marine equipment of all kinds, particularly in the light of their experience with the crash of Upper Clyde Shipbuilders three years ago.

What it also makes clear is that the liquidator seems agreed on a complete sale of the shipyard interests, rather than considering any offers from any other interested parties (such as Tate and Lyle, which is interested in buying the profitable Appleford yard in North Devon).

It is understood that Mr Benn and Mr Nicholson hope to work out the final details for court approval in a matter of weeks.

Marked decline in capital investment reflects companies' lack of confidence

By Melvyn Westlake
 Economics Staff

British companies now appear to be reducing markedly the level of their fixed capital spending. There was a fall of some 34 per cent in total investment by the manufacturing, distributive and service industries between the first and second quarters of this year, according to figures released by the Department of Industry yesterday.

Although companies spent some £1,066m on building work, machinery and plant and machinery between April and June (at 1970 prices) and seasonally adjusted, this was more than 7 per cent less than in the fourth quarter of last year, before the level of economic activity began to slow down sharply.

The decline in capital investment is proving a good deal sharper than expected by the National Institute even in last month's Economic Review—which foresaw a drop in company investment of a little over 2 per cent between the fourth quarter of 1973 and the second quarter of 1974.

The latest figures from the department confirm the lack of confidence in company boardrooms about current economic prospects.

The reduction in capital investment by manufacturing industry—which is the most important component in total spending—was, however, less sharp than for other sectors in the second quarter, declining 2 per cent to about £515m, compared with the first three months of the year. It remained above the level of capital spending in all quarters last year.

In contrast, provisional estimates indicate that the distributive and service industries (excluding shipping) spent 5 per cent less in April-June than in January-March, at £468m. Expenditure on vehicles by these industries has fallen by over 8 per cent, and on plant and machinery by over 10 per cent, in the first six months of this year.

In fact, the level of spending by manufacturing industry appears to be holding up moderately well in the context of the dismal survey of investment intentions conducted by the Department of Industry last April and May.

This indicated a sharp loss of confidence among manufacturers and a sizable scaling down of capital spending plans. As such plans have to be made many months in advance, there is every likelihood that the reduction in expenditure this autumn will be commensurately greater.

Tunnel cost put at £1,400m

The cost of building a Channel tunnel under today's conditions is likely to exceed the 1973 estimate of £850m by about two thirds, Mr Keith Wickenden, executive chairman of European Ferries, claimed.

Mr Wickenden, a chartered accountant, challenges the 1973 assumptions in the Sept issue of *Accountancy*, published yesterday.

W German surplus down

Frankfurt, Sept 2

West Germany's basic payments surplus in July declined to 735m marks (about £120m) from 973m marks (about £160m) a year earlier, Deutsche Bundesbank figures showed today. The June surplus was 715m marks (about £118m).

The basic balance, regarded as the best indicator of West Germany's payments position, covers only the current account and long-term capital movements.

Bonn drafts Bill to tighten bank controls

Bonn, Sept 2.—Dr Hans Apel, Finance Minister of West Germany, said the Bonn government will shortly put forward proposals to tighten up on supervision of banks.

In a written reply to opposition questions on the collapse of the Herstatt Bank, Dr Apel said the Herstatt case made it clear that urgent improvements should be introduced.

These, he said, would be incorporated in an emergency Bill which would be put to Parliament in advance of a general amendment to the German banking law which has been under study for some time by the Finance Ministry, the central bank and the Federal Supervisory Office for Banks in Berlin.

The Bill would deal with questions raised by the Herstatt debacle and would incorporate tighter controls on credit, as tabled in a Bill introduced in the German Upper House by the State of Hesse.

Dr Apel said the government was examining how the current systems of insuring the deposits of bank customers could be improved, and it would make its conclusions public as soon as possible.

He pointed out that the decision had already been taken to limit banks' open foreign exchange positions to 30 per cent of capital liability.

The central bank and the Federal Supervisory Office for Banks had done everything within their power to avoid Herstatt's public insolvency, he said.

Once negotiations to rescue the bank failed in the afternoon on June 26, it had to be closed immediately to prevent people making further deposits, or certain creditors gaining an unfair advantage—for example, by withdrawing deposits.

The minister said the government appreciated that the timing of the bank's closure had immediately prevented foreign exchange transactions and particularly affected foreign banks.

But "today it is increasingly recognized abroad that the Federal Supervisory Office could not have acted in any other way once the rescue bid failed. The government is confident that the high reputation which the German banking industry enjoys abroad has not been seriously disturbed".—Reuter.

German plant for China

A spokesman of Demag confirmed yesterday in Duisburg reports from Peking that a West German consortium had won a DM150m (about £24m) order from China for a continuous casting process steel plant. Demag, one of the consortium, said the contract was signed in Peking over the weekend.—Reuter.

Odhams inquiry head

Mr Michael Foot, Secretary of State for Employment, has appointed Professor George Thomason, Professor of Industrial Relations, University College, Cardiff, to head the committee of inquiry into the dispute at Odhams (Waxford).

SOBRANIE (HOLDINGS) LIMITED
 Further Progress in a Difficult Period

The 36th Annual General Meeting of Sobranie (Holdings) Limited was held on September 2 in London. The following are extracts from the circulated statement of the Joint Managing Director, Mr. Charles C. Redstone:

The fortitude and determination of the British race is reflected by our refusal to go under—despite all the efforts of our governments, seers, and sages to put us under and keep us there with a boot-hook!

Each year I harp back to my previous year's speech. Last year I remarked—as I have done previously—that notwithstanding all the difficulties, all the pitfalls, all the hurdles, all the trip wires, we had nevertheless managed to do better than in the previous year.

Last year our turnover was £4,215,147. This year it is £4,536,152. We have increased the profit from £147,016 to £207,111, and we are—thanks to the kindly benevolence of the Chancellor—increasing the dividend by a fractional percentage, but not enough to set our shareholders on the road to decadence and ruin.

Tobacco Division. This segment of our business produced substantial increases both in the United Kingdom and overseas, both under our Balkan Sobranie, our Sobranie, Sullivan Powell and non-branded trade marks. We have now established a new marketing company in the U.S. with a substantial and respected cigar manufacturer and the first few months have been most encouraging. This will, we are sure, assist us to hold and improve our position in the U.S. as the leading manufacturers of British quality pipe tobacco. And, gratifyingly, our sales of Sobranie Luxury Cigarettes in the U.S. show continuing signs of satisfactory increase.

Laundry and Dry Cleaning Division. Trading in this area is if anything more difficult than in the tobacco segment. Wages have increased substantially in an industry which is labour intensive and other costs, such as fuel, oil and water, leap up alarmingly. We are engaged in a large-scale rationalisation of the Laundry Division, with an eye on the return we receive for the capital employed. We have, I am pleased to say, increased our business in linen hire and providing services to the hotel and catering trade.

Outlook. The current year may well prove to be probably even more difficult to cope with than the last, beset as we are by rip-rapping costs and a predatory Government. The outcome is unpredictable, but you can be assured that we will do our best. We retain the good fortune of first-class staff and will go to help.

How the markets moved

The Times index: 85.08 +0.02
 FT index: 216.9 +0.3

Rises

Anglo-Cont Inv	2p to 26p
Blytheors	30p to 930p
Bracknell Mines	15p to 250p
Brown N. Inv	3p to 27p
Concor Hls Ltd	3p to 20p
Corinthian	2p to 19p
Harmo Ind	1p to 12 1/2p

Falls

Ayer Hittan	8p to 10 1/2p
Broken Hill	15p to 45 1/2p
Chatterbox	5p to 15 1/2p
Equity Bxt	3p to 28p
Gordon, L. Grp	4p to 34p
Jovial	1p to 12p
Lloyds Bk	18p to 12 1/2p
Wrens, J. Ord	3p to 10 1/2p
Reuter	3p to 27p
Silenthic	1p to 11p
Trust Hse Forie	8p to 57p
WGI	3p to 30p
Wittic, T.	3p to 21p

THE POUND

Australia	5	1.615	1.565
Austria Sch		44.75	42.75
Belgium Fr		94.50	91.75
Canada F		2.335	2.285
Denmark Kr		14.45	14.05
Holland Mkt		9.00	8.75
France Fr		11.35	11.05
Germany DM		6.30	6.10
Greece Dr		81.00	74.50
Hongkong \$		12.00	11.65
Italy Lr		1615.00	1565.00
Japan Yn		725.00	700.00
Netherlands Gld		6.40	6.20
Norway Kr		13.10	12.75
Portugal Esc		71.00	68.50
S. Afr. Rd		1.99	1.91
Spain Pcs		135.00	130.00
Sweden Kr		10.60	10.30
Switzerland Fr		7.15	6.90
US \$		2.38	2.31
Yugoslavia Dnr		37.00	35.00

On other pages

Business appointments	18	Share prices	20	LRC International	18
Appointments vacant	19	Bank Base Rates Table	19	Photopia International	19
Financial Editor	17	Company Meeting Reports	19	Robb Caledon Shipbuilders	18
Financial news	18, 19	AAE	16	Sobranie (Holdings)	15
Letters	16	AEG-Telefunken	16	Interim Statement:	
Diary	17	Crouch Group	18	House of Fraser	18
Commodities	18	The Anglo-Indonesian	18	Redemption Notice:	
Market reports	19	Plantations	18	Esso Overseas Finance	17

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Save & Prosper can help you reduce the burden of school fees through two new school fees plans.

Both offer you very substantial savings in the cost of fees and provide a series of guaranteed payments while your child is at school.

Should you die before your child's education is completed, we would meet in full the payments for school fees secured under the plan.

Other important features are that you need not specify the child's school until one month before the first fee payment is due, and that there is no liability to higher rate tax in connection with either plan.

For further details of these plans, please complete and return the coupon below.

Number of complete years before the child begins at school	SCHOOL FEES INCOME PLAN		SCHOOL FEES CAPITAL PLAN	
	Monthly contribution* to secure fees of £1,000 a year for 5 years	Total outlay to secure fees of £5,000	Lump sum investment to secure fees of £1,000 a year for 5 years	Lump sum investment to secure fees of £5,000
12	£17.70	£2,111	£1,808	
10	£20.90	£2,762	£2,104	
8	£26.80	£4,025	£2,440	
6	£32.60	£4,303	£2,818	
4	£42.50	£4,590	£3,201	
2	£58.60	£4,922	£3,614	

* Assuming the father is aged 35.

To: Save & Prosper Group, 4 Great St. Helens, London EC3P 3EP. Telephone: 01-564 8899.

Please send me the Save & Prosper School Fees Plans booklet.

Please ask your representative to contact me.

Name _____
 Address _____
 Tel. _____
 Not applicable to Eire residents. 39-074

SAVE & PROSPER GROUP

UK in line for £3m tool orders from Brazil

Orders worth £2.25m have been won by British machine tool and component manufacturers taking part in the British Industrial Exhibition in São Paulo, Brazil. Final sales by the 41 United Kingdom companies at the show, which closed on Sunday, could top the £3m mark.

BLEU surplus shrinks

The payments surplus on a current account basis for the Belgian-Luxembourg Economic Union declined to 4,100m Belgian francs in the first half, from 24,400m francs a year earlier, according to preliminary figures. The Belgian Finance Ministry said the decline was the outcome of dearer crude oil and petroleum products.

VW's American project

Volkswagenwerk AG's supervisory board met yesterday in Wolfsburg to discuss for the first time the setting up of a United States production plant. But no decision will be taken until the next regular supervisory board meeting on November 6, a company spokesman said.

Iran gas pipeline

Turkey and Iran have reached agreement on a pipeline project which would carry Iranian natural gas 1,900 kilometres to Turkey for shipment to Western Europe, petroleum industry sources said in Ankara on Sunday.

Britten-Norman scoops £6m order from Philippines for 100 Islanders

By Arthur Reed
Air Correspondent
Despite a major sales drive by the American aircraft industry, the second level of British aerospace stole the limelight at the Farnborough Air Show yesterday.

Britten-Norman, the light aircraft manufacturer based in the Isle of Wight, announced a new order for 100 of its Islander, 10-seater airliners, worth a total of £6m.

The buyer is the Republic of the Philippines, which will use the aircraft, some of them equipped with floats, to link the thousands of small islands which form the republic.

Britten-Norman, now part of the Fairey Group, claimed at Farnborough yesterday that its sales of Islanders, now exceed-

ing 650, are higher than any other previous sales record for a multi-engine commercial aircraft in Britain since the war.

A second small British aircraft company which is delighted with the way in which Farnborough is turning out is Short Brothers and Harland, the Belfast-based manufacturer of the new 30-seater airliner, the Short SD 3-30.

In spite of all the pressures against smooth production in Northern Ireland at present, the 3-30 made its maiden flight on August 22, three weeks after it was scheduled.

Shorhs has already announced three firm orders to a third-level operator in the United States, and can be expected to announce further orders tomorrow.

Inexpensive aids to productivity in clothing trade

Work aids designed to produce substantial financial savings and assist Britain's clothing industry in boosting needed productivity because of a continuing decline in the labour force are highlighted in a report, published today.

Prepared by Intubon AIC Management Consultants for the economic development committee for the clothing industry (Little Noddy), the report describes a range of simply engineered work aids. The aids cost less than £150 to produce, including materials and labour, and many were below £50. "Low Cost Work Aids for the Clothing and Garment Industries, £2.50 from Noddy Books.

Benn threat holds back private steel investment

By Peter Hill
Investment by independent steel producers is being held back because proposals could be included in the proposed National Enterprise Board's shopping list.

This was claimed yesterday by Mr Michael Marshall, the Opposition's link spokesman on the steel industry, after visiting independent steel and wire manufacturers in the Sheffield and Doncaster area.

He said he had encountered "grave disquiet" about the prospects of further nationalization. Talks in which Mr Anthony Wedgwood Benn, Secretary of State for Industry, had taken part in June in Brussels indicated that he wished to restrain the activities of the

independent steel companies. If present EEC fair competition rules inhibited him, he intended to extend the state monopoly by further nationalization.

Mr Marshall, in a statement, said the independent producers—who account for about one-third of Britain's finished steel output by value—were directly affected by the Government's White Paper on industrial policy.

"Planning agreements would put an intolerable strain on many small and medium sized companies, but it is the National Enterprise Board which is having the most immediate and dangerous impact", he said.

Private steelmaking investment through the capital market had effectively dried up

US top-level meeting on Franklin's future

From Frank Vogl
Washington, Sept 2

A top-level meeting of officials from several government agencies is scheduled to take place here tomorrow to try to resolve the persistent problems of the Franklin National Bank of New York.

The discussion at the meeting will centre on a series of alternative proposals put forward by Franklin and by other banks.

Participating will be top representatives from the Federal Reserve Board, the office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, which insures bank deposits; the Securities and Exchange Commission; the Treasury, and possibly the anti-trust division of the Department of Justice.

All these agencies agree that there is a need to act urgently, but some people here have been cautious about expecting a quick solution. These include Mr Steve Gardiner, deputy Secretary of the Treasury.

Under one proposal, the bank's foreign loans and assets would be taken over by several major banks. The Fed should arrange this, while Franklin's domestic operations are consolidated, with the aid of continuing financial assistance from the Fed.

Under another proposal, the bank's foreign assets and its London branch, plus many of its Long Island branches. This bank has branches of its own in Long Island and, as a result some of the Franklin branches there will be acquired by another bank.

In this context, the name of the National Westminster Bank continues to be mentioned as a possible purchaser by sources in touch with the situation.

Under yet another proposal, the assets of Franklin would be split up among several banks and this parceling up operation would effectively mean the death of the Franklin name in banking.

The First National City Bank of New York is often mentioned as one of the banks interested in participating in such a solution, as is the European-American bank, in which Britain's Midland Bank is one of the partners.

An acquisition of even a part of Franklin by a large United States bank would directly involve anti-trust issues.

However, experts here believe that if the Federal Deposit Insurance Corporation, the Fed and the Comptroller of the Currency can all agree on a solution, then the Justice Department will make sure it is not blocked because of anti-trust considerations.

The Federal Reserve is said here to favour a solution that involves at least one large New York bank taking a direct and important interest in Franklin.

Kenneth Owen

LETTERS TO THE EDITOR

Wealth Tax and the viability of houses

From Mr Michael Gibbon
Sir,—Professor Ian Little, in his article on August 29, writes of the "problem of threatening the viability of businesses".

I wonder what will happen to the viability of dwelling-houses if, as seems probable, we have a Healey tax rather than a Little tax.

Suppose you have an elderly man living with his elderly wife on an income from savings that cannot sell investments because he could then no longer afford to exist. Perhaps he begins by selling the furniture he has for-

bears collected in happier times. Thus he pays one year's tax and reduces himself just below taxable level.

But then, by the march of inflation, he comes again above the level. Does he go on selling furniture until he is reduced to a barrack or prison austerity, only to be overtaken by inflation once more? What next?

He can scarcely sell a room or two of his house, or part of the roof. He must sell the whole house and join the bungalow queue.

However, as of course everyone else in his predicament will be trying to sell their houses at the same time, he will not get anything like what the assessor said it was worth. It may indeed be found to be unsaleable.

Will he still be liable in the tax? Must he sell his investments, struggle for a year or two and then apply for national assistance?

What happens to the house—and indeed to almost all the houses that are mentioned in Pevsner's books on the Coun-

ties of England? Are they all to go derelict because of, or for fear of, the wealth tax? Ironically, many of them are listed as being of "national importance".

The injustice I am supposing would occur, as well it could do, when the greater part of a man's "wealth" was tied up in his house, when, in fact, there was no way of realising this so-called wealth except by destroying it as such, by the fall in pound value when the owner was forced to sell.

In fact houses and furniture, until they are sold, are not "wealth" at all. Their value can only justly be determined by a sale in free circumstances. Certainly it cannot be determined by a "spot check".

Finally, it seems to me to be the grossest injustice to introduce a wealth tax at all until inflation has been brought under control, and stays controlled.

I am, Sir, your obedient servant,
MICHAEL GIBBON,
Abborton Hall,
Farnborough, Wiltshire.

Shortages of shipping services

From Mr D. Parker
Sir, I write with reference to your article printed on August 15 entitled "Growing Shortage of Shipping Services" relative to the trades from the Indian sub-continent to Europe.

The article is based on two conclusions drawn in the opening paragraph: firstly, that rising freight rates are inhibiting growth in India's exports and secondly, that there is an increasing inadequacy of shipping services.

There are, of course, direct links between the two. If a shipowner is confronted with increasing losses in a particular service there must come a time of curtailment and possible departure, particularly if profitable shipping services are available elsewhere.

Most cargo line operators have a long tradition of service in a given trade, and this is particularly true in the Indian trade where the conference was first brought into being nearly 100 years ago—but tradition is not shown in the share-holders' balance sheet.

That there has been worldwide cost inflation during recent years is incontrovertible and shipowners have not been the least affected. Indeed, it is relatively common knowledge that a very large proportion of their costs are outside their direct control—port charges, bunkers, stevedoring, insurance and repairs are all examples where costs are determined and are applied by independent authorities, unions or companies.

Indeed, particular emphasis must be placed upon the appalling deterioration during recent years in the productivity of most of the United Kingdom ports served by the Conference, of long berthing delays, of greatly increased costs and of such a decline in the daily rate of discharge and/or loading that it has recently become cheaper and quicker for many United King-

dom cargoes to be discharged at continental ports and thereafter transhipped to such ports as Felixstowe.

The immediate additional costs to the lines will readily be appreciated; it must be hoped that for the greater good of the country, dynamic remedial action will be taken.

It is in this context that the Conference has, during recent years, been compelled to increase freight rates more frequently than in previous years, for it is a matter of record that between 1957 and 1970 only two general rate increases were introduced in the westbound trades, namely 10 per cent in August, 1963 and 7.5 per cent in September, 1966.

The article claims that the Conference has deteriorated into a body which has eliminated price competition and that it merely pools its profits. While this conclusion contradicts an earlier suggestion that losses in the westbound trade require to be subsidised by profits in the eastbound trade, it entirely ignores the basic fact that the combined and "pooled" resources of all the lines are far better able to effect the economies necessary to provide services for the low-value commodity exports from the Indian subcontinent.

There are other aspects of the Conference services which could well be commented upon but it should at least be made known that the Conference has, for over a decade, consulted with shippers' councils over such matters as general rate increases, and provided them with full details of the trading results of the Conference Lines as a body.

It has illustrated the pattern of its services and the need for securing a quick turn-round of vessels and thereby keep the general level of its freight structure within control. It has also applied the policy of providing to the national lines a proper participation in their own trades, all of which has preceded the principal recommendations embodied in the United Nations' Code of Conference Practice.

Yours faithfully,
D. PARKER
Secretary,
India-Pakistan Conferences,
Confery House,
St James's Road,
East Grinstead,
Sussex.

Air traffic control advances at Farnborough

Significant advances in the application of computers to air traffic control in both Britain and the United States are being demonstrated at the international air show at Farnborough this week.

A new Marconi concept in distributed computing is to be implemented at the Scottish air traffic control centre at Prestwick, while the American authorities have selected Burroughs to provide the next stage in the national plan to automate air traffic control in the United States.

For the Prestwick centre, Marconi Radar Systems is to supply a system based on 33 of the company's recently announced Locus 16 processors. This contract, placed by the Civil Aviation Authority, is worth almost £1.5m.

Information on the position, height and identity of aircraft

Computer news

flying over Scotland will be passed from radar sites (in Scotland, Northern Ireland and northern England) via telephone lines to the Prestwick centre.

This information will then be evaluated by four of the Locus processors and passed to 29 display units, each of which is driven by a single Locus. Twenty-five of these are operational displays used by the air traffic controllers.

This "distributed" approach to the processing of the radar data and the presentation of the controller's display screens is an alternative to the use of a large central computing system where

all the processing is concentrated in one place.

Mr John Sutherland, managing director of Marconi Radar Systems, said yesterday at Farnborough that more than 60 Locus processors had been sold to date.

On the United States Federal Aviation Administration stand Mr Charles Dowling of the FAA reported that Burroughs had been chosen to supply computer-based systems for over 70 airports in America. This followed an experimental system supplied by Lockheed.

These are airports which require relatively modest levels of automation. In some of them the controllers' displays will be readable in daylight in the control tower "cab" (from where the controllers view the airport) and will not have to be in special radar control rooms.

This program known as

Automated Radar Terminal System (ARTS) 2, represents the third phase in the automation of air traffic control in the United States. The two other phases have already been implemented; they cover on-route flying, and flying within a 60-mile radius of the major airports, respectively.

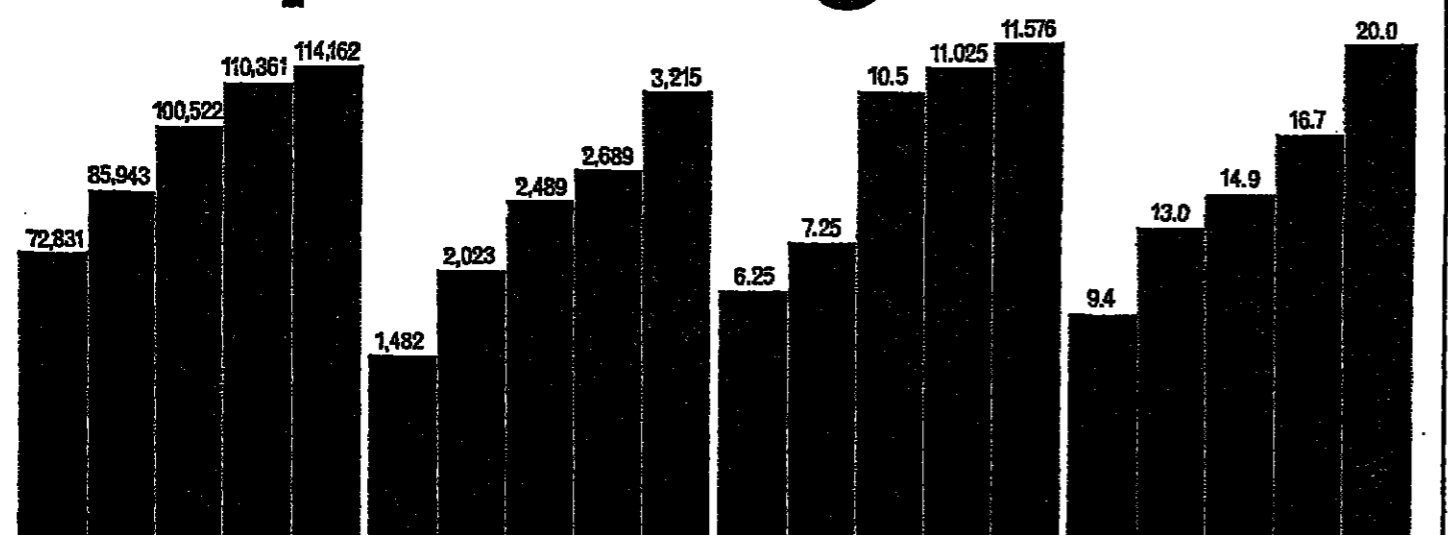
For on-route control, large IBM 9020 computer systems (similar to that now being installed at West Drayton) are used at 20 regional centres across the country.

For terminal control at 61 of America's busiest airports, Univac systems have been installed under the ARTS-3 programme. These give more comprehensive processing than will be provided by ARTS-2; both systems are designed on a modular basis to accommodate future improvements.

These systems will be provided by ARTS-2; both systems are designed on a modular basis to accommodate future improvements.

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A picture of growth.



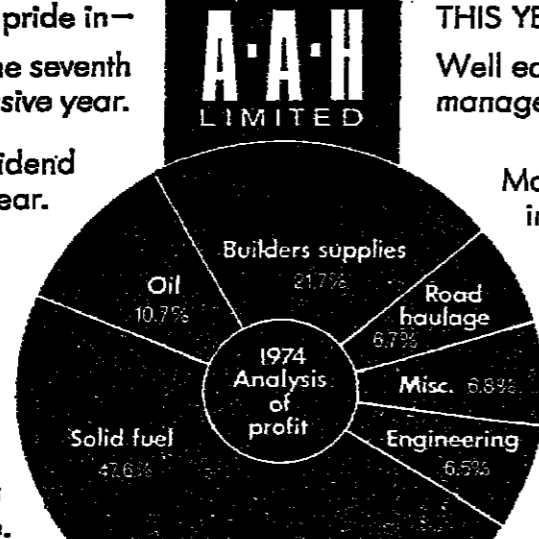
IN 1974 we took pride in—
Increasing Group profits for the seventh successive year.

Increasing the ordinary dividend for the fifth successive year.

Maintaining our domestic fuel supplies to householders.

Continuing a vigorous acquisition policy the soundness of which contributed to the steady annual growth of earnings per share.

Balancing the growth in other activities now 52.4% of total profits compared with 16.9% five years ago with the growth in solid fuel profits.



THIS YEAR we are—
Well equipped with resources both managerial and financial.

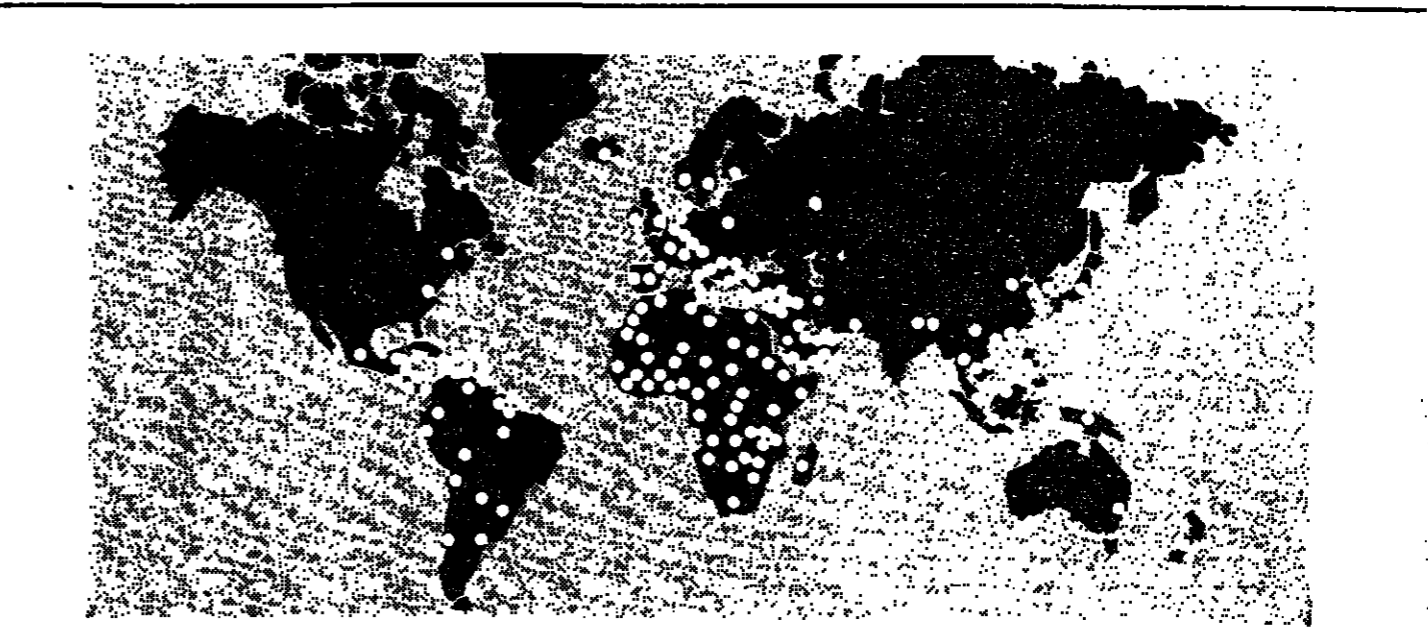
Making a good start with profits in the first quarter ahead of the corresponding period last year.

Planning further expansions and acquisitions.

Confident but far from complacent.

If you would like to know more about us please write to the Secretary for a copy of our Report and Accounts.

AAH Limited, 21-24 Bury Street, St. James's, London SW1Y 6AP.



Established in 154 Countries AEG-TELEFUNKEN

The Federal Republic of Germany is one of the leading industrial countries which has a limited home market. We all live by buying and selling on an international basis. In times of rising costs for transport, raw materials and manpower, this requires world-wide partnership. And so, for decades, we have been concentrating on countries with a future. On prospective markets.

Today, one in seven of our people, 25,000 in all, work abroad. One third of our turnover of twelve billion DM comes from abroad, through manufacturing and marketing organisations all over the world. And by direct export.

In the past business year we were able to establish new subsidiaries in 14 new countries. This is just an indication of how know-how spreads. Faster and faster. World-wide.

Our electronics factory for entertainment and communications equipment in São Paulo, Brazil.

Summarised consolidated balance sheet closed on 31st December 1973

Assets	1972		1973	
	DMm.	DMm.	DMm.	DMm.
Fixed assets	1,294	1,347	1,294	1,347
Financial assets	755	864	755	864
Fixed and financial assets	2,049	2,211	2,049	2,211
Differences arising on consolidation	182	175	182	175
Inventories and work in progress	1,556	1,634	1,556	1,634
Receivables	2,602	2,826	2,602	2,826
Liquid assets	622	542	622	542
Current assets	5,060	4,904	5,060	4,904
Balance	7,301	7,290	7,301	7,290

Liabilities	1972		1973	
	DMm.	DMm.	DMm.	DMm.
Issued share capital	704	704	704	704
Reserves	681	681	681	681
Minority interests	55	60	55	60
Shareholder's equity	1,440	1,445	1,440	1,445
Liabilities long-term	2,180	2,062	2,180	2,062
medium- and short-term	3,465	3,513	3,465	3,513
Total liabilities	5,265	5,265	5,265	5,265
Distributable net profit	60	70	60	70
Balance	7,301	7,290	7,301	7,290

The annual general meeting held on July 12th 1974 resolved a dividend of 5.— DM per DM 50.— share for the business year 1973. Copies of the complete Annual Report may be obtained free of charge from AEG-TELEFUNKEN, Finanzverwaltung, 6 Frankfurt 70, AEG-Hochhaus, W.-Germany.

Berlin and Frankfurt (Main), in July 1974
ALLGEMEINE ELEKTRIZITÄTS-GESELLSCHAFT AEG-TELEFUNKEN
Chair of Management

هكلمن الأهرل

BY THE FINANCIAL EDITOR

Lloyds: no bank is an island

The last thing Lloyds—or any major British bank—wanted was a reminder that they, too, are vulnerable to expensive "irregularities", however conservative their policies and how ever rigid their safeguards.

to make an individual choice. Arrangements are probably being made, then, whereby shareholders will be given the chance to assign their shares to an independent United States stockbroker with a minimum of administrative trouble.

House of Fraser

What stands out in the House of Fraser figures for the six months to July 27 is that the group is gaining market share from other department store groups, with Debenhams perhaps the most obvious victim.

Bucking the trend

As for the remainder of the year, the hope or even expectation is that the £14m profit seen in the second half of 1973 will be repeated if not slightly exceeded.

San Paulo Railway

It is a sobering comment on the level of stock exchange turnover these days that San Paulo Railway, with just 3m shares in issue, should have been the most actively traded stock in the market yesterday.

share, but on top of that has to be added the investment currency premium (less 25 per cent forfeit under the surrender rule), which brings the total up to 122p.

First, though, there could be some technical problems for the shares. Many of the present holders bought when compensation of 300p or so seemed a possibility and the price stood well above 130p.

More temptingly for the speculators, though, there are two alternatives. One is that a cash shell worth close to £4m could prove attractive to a bidder.

H. Samuel

H. Samuel's sales of gold, silver and diamond jewellery were exceptionally good in the first half and remain so.

But the German loan merely buys time. It is not enough to meet all of Italy's needs for foreign borrowings in the months ahead.

Italy's economy has this year been suffering from a double strain on its external account. The rise in oil prices has hit the country hard, with its impact made all the worse by the fact that the Italians have their own no energy reserves of their own to limit the blow.

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Thoughts for the future

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Farmers caught in the middle of the food price tussle

Shoppers were told at the beginning of last year that one reason why beef was dear was that much of it was going to Japan at prices we could not afford.

The immediate answer is that beef does not come from calves any more than lamb chops do, and beef cattle are not being sold for 2p each.

But if calves can be sold for 2p each why is beef still so expensive? The answer is that beef does not come from calves any more than lamb chops do, and beef cattle are not being sold for 2p each.

Italians live off borrowed time

For the moment, at least, disaster has been averted for Italy. Just as the country's workers, too, are slipping into a recession.

But the German loan merely buys time. It is not enough to meet all of Italy's needs for foreign borrowings in the months ahead.

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Funnelling North Sea oil to Shetland

Early next April American offshore engineers, J. Ray McDermott, will begin laying the first section of the 93-mile long pipeline from Sullom Voe in the Shetland Islands to a cluster of oilfields close to the boundary with Norwegian waters to the north-east.

It will be the most difficult pipelaying contract ever undertaken by the oil industry. The 36in diameter pipe (made in Germany because the British Steel Corporation does not have facilities to produce this quality) will be lowered into 500ft of water.

Pipelaying can take place only during the relatively calm weather of the summer and it will not be completed before the winter storms force the pipelaying barges to move further south.

Initially the five groups pumping oil into the Shetland fields will be producing 300,000 barrels of oil a day, but by 1990 the pipeline will be operating at its maximum capacity of one million barrels.

The Brent pipeline alone would make Sullom Voe a major oil terminal, but the B.P. consortium group is already planning a pipeline that will bring oil from the Niania Field ashore in the Shetland Islands.

The tanker terminal, which like a counterpart in the Middle East will be capable of handling 300,000 deadweight-ton super tankers, will be built and operated by the county council and will be available to ship out the crude from any other pipelines that come to the terminal.

Once the Brent system is built and operating, the 17 companies will then face the intricate task of allocating space in the pipeline to each of the field operations. At a million barrels a day the line has a capacity below the combined peak production of the five fields.

The capacity of the pipeline can be increased by building a booster station halfway between Cromoran and the Shetland Islands, but this would cost almost as much as building a second parallel pipeline and might not be financially acceptable because oilfields remain at their peak production levels only for a few years.

But for companies faced with the threat of partial nationalization; a doubling of offshore construction costs in two years, and the most unfriendly operating environment in the world, just how this dilemma will be resolved is the least of their worries.

Energy Correspondent

Roger Vielvoys

Foreign bids

If anyone benefits from the planning and execution of the large, cash-rich company that suddenly finds that it can acquire additional manufacturing capacity on the cheap.

Little overseas interest

As for the remainder of the year, the hope or even expectation is that the £14m profit seen in the second half of 1973 will be repeated if not slightly exceeded.

San Paulo Railway

It is a sobering comment on the level of stock exchange turnover these days that San Paulo Railway, with just 3m shares in issue, should have been the most actively traded stock in the market yesterday.

Business Diary: Cuckney's new property • Lugano story

There seems some surface irony in the appointment last night of Mr John Cuckney, the highly regarded banker and industrialist, as new man at the Crown Agents.



John Cuckney: new man at the Crown Agents.

be turned over to more regular Civil Service administration. For Cuckney, it means dropping a long-standing department, with something like £1,500m worth of assets, for a much tighter administrative unit employing fewer than 2,000 people.

It is almost certainly going to prove a longer stint for Cuckney than his last. There is no time limit to the appointment, but a minimum five years' stay is likely.

Cuckney must feel his job at the Property Services Agency has been done, his staff of 50,000 now geared to providing other government departments with property management expertise and services, covering construction maintenance and building supplies. It can now

it is precisely those skills acquired in the private sector which will be going into some detail.

Quick work

It is hard to decide whose achievement was the more remarkable: Marc Colombo, who apparently ran up hundreds of millions of pounds worth of uncovered, undetected foreign exchange positions from his dealer's desk at Lloyds Bank International's tiny Lugano branch; or Robert Gras's, whose task last week as LBI's chief foreign exchange dealer was to close those positions without letting the market get wind of what was happening.

The success of the second operation is the only aspect of the whole bizarre affair from which Lloyds can derive any comfort. Lugano's position near the Swiss/Italian border has, of course, earned it a slightly unsavoury reputation as a bank money centre. But even so, the indicators of scale of Mr Colombo's activities had seasoned London dealers gasping yesterday.

The clear lesson is that all the external and internal controls in the world are powerless to help a bank if a dealer decides not to bother telling anybody what he is up to.

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NOTICE OF REDEMPTION

To the Holders of Esso Overseas Finance N.V.

9% Guaranteed Debentures Due 1985

NOTICE IS HEREBY GIVEN that, pursuant to the provisions of the Indenture dated as of September 15, 1970 providing for the above Debentures, said Debentures aggregating £1,000,000 principal amount bearing the following serial numbers have been selected for redemption on September 15, 1974, through operation of the Sinking Fund, at the redemption price of 100% of the principal amount thereof, together with accrued interest to said date:

Table with columns for Debenture Number and Principal Amount. Includes serial numbers like 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Payment will be made upon presentation and surrender of the above Debentures with coupons due September 15, 1975 and subsequent coupons attached at the main offices of any of the following: Morgan Guaranty Trust Company of New York, 15 Broad Street, New York, New York; 10015 Morgan Guaranty Trust Company of New York in Brussels, Frankfurt am Main, London, Paris and Zurich; Banca Morgan Vonwiller S.p.A. in Milan and Rome; Bank Mees & Hope, N.V. in Amsterdam; and Kredietbank S.A. Luxembourg in Luxembourg. Coupons due September 15, 1974 should be detached and collected in the usual manner.

On and after September 15, 1974 interest shall cease to accrue on the Debentures selected for redemption.

Dated: August 13, 1974

NOTICE The following Debentures previously called for redemption have not as yet been presented for payment: 21561 2160 2636 2781 3288 4076 5400 6097 6202 6214 6791 6838 8270 12271 12046 12328 12394 12927

FINANCIAL NEWS

House of Fraser

LIMITED

Interim Statement for the 26 weeks to 27th July, 1974

The unaudited results of the operations of the Group, excluding Associated Companies, for the 26 weeks to 27th July 1974 are set out below with comparative figures for the 26 weeks to 28th July 1973 and the audited figures for the 52 weeks to 26th January 1974.

	26 weeks to 27th July 1974	26 weeks to 28th July 1973	52 weeks to 26th January 1974
Turnover	£133,708	£108,131	£259,035
Included in turnover	10,363	5,708	16,772
Trading Profit	8,886	6,699	24,484
Less: Interest paid less received	1,347	1,028	1,953
	7,539	5,671	22,531
Less: Depreciation	1,006	801	1,872
Group Profit before Tax	6,533	6,870	20,659
Less: Corporation Tax	3,397	3,320	9,216
Net Profit	3,136	3,550	11,443
Less: Preference Dividends	16	16	32
Attributable to Ordinary shareholders	3,120	3,534	11,411
Earnings per share	2.57p	3.24p	10.13p

Corporation tax for the period has been calculated at 52% (1973— at a composite rate of 48.33%). The earnings per share have been calculated on the 121,508,602 ordinary shares of 25p in issue throughout the period (1973—109,039,852).

Total turnover for the period showed an increase of 23.65%. Adjusting for new acquisitions and closed stores the increase in comparable figures is 17.06%. Because of continued legislative restriction of margins and increased overheads it has regrettably not been possible to maintain the net profit in spite of the substantial increases in turnover achieved. Every effort will be made to increase turnover still further but until there is some easing of the control of margins it will become increasingly more difficult to absorb continually rising costs.

Interim Dividend on Ordinary Shares

The Directors have declared an interim dividend on the ordinary shares on account of the year ending 25th January 1975 of 1.25 pence per share (1.25p) absorbing £1,518,858 (£1,366,972). Warrants will be posted on 12th December 1974 to shareholders on the register at close of business on 4th October 1974. The transfer books will be closed for the period from 7th to 19th October 1974 both dates inclusive.

THE ANGLO-INDONESIAN PLANTATIONS LIMITED

Highlights from the directors' report and statement of the Chairman, Mr. Michael Nightingale, O.B.E.

- Group profit for the year ended 31 December 1973 £123,794 (1972 Loss £29,579).
- Interim dividend of 7% paid for 1974. A final dividend anticipated.
- 736,503 kgs tea and 727,898 kgs rubber manufactured by the subsidiary during the year 1973 to show a profit of some £60,000.
- Board proceeding with development of 2,500 ha. of rubber in North Sumatra.
- Company has ample cash with which to invest in industrial projects both inside and outside Indonesia.

Annual General Meeting at 37 Queen Street, E.C.4, at noon, Tuesday, 3 September, 1974.

LRC INTERNATIONAL LIMITED

GROUP HIGHLIGHTS for the year ended 31st March 1974

	1974	%
Sales in the UK*	£27.5 m	8%
Exports from the UK†	£9.3 m	15%
Sales by Overseas Subsidiaries	£16.9 m	16%
Profit before taxation*	£5.0 m	3%
Dividends to Shareholders	£1.1 m	
Retained in the business	£1.3 m	
Basic earnings per share	6.3p	

* Adjusted for profits and sales of wines and spirits division
† Includes £2.5 million to overseas subsidiaries

Copies of the Annual Report and Accounts and the Chairman's Statement can be obtained from the Registered Office: North Circular Road, Chingford, London E4 8QA. The Annual General Meeting will be held in the Abercorn Rooms, Great Eastern Hotel, Liverpool Street, London EC2P 2AN on Thursday, 26th September, 1974, at 12 noon.

Trail of disputes militates against better times for Mersey Docks

By Ashley Drucker

Reporting a loss more than halved in the first six months of 1974, Merseyside's tarnished image is further accentuated in the accompanying statement from Mr. J. J. Page, chairman of Mersey Docks & Harbour Co, which refers to a loss of £1m a year from the Royal Seaford Docks imbrolio, and an expected "substantial" full-time loss for the group.

The loss for 1973 was £2.5m, after crediting a grant of some £1.68m from the Department of Industry for losses on merged cargo handling operations.

Though there was some improvement in the quarter to March 31, a loss of £854,000 was incurred, while that to end-June was kept in check by the oil

crisis and, for a while, the shorter week. Since then the dispute at Stanlow oil refinery has meant substantial tonnage of crude oil being lost to the port. Added to this, operations were severely curtailed by the unofficial strike by engineering maintenance staff for over two months to August 19.

Mr. Page estimates that this strike resulted in a loss to the company of some £2.5m, with the further complication of affecting confidence of customers and thus damaging trade prospects.

Apart from these mishaps, the new grain terminal at Royal Seaford Dock has not been opened in spite of all efforts. The company, therefore, has requested an independent inquiry to resolve this dispute, particularly in view of the

heavy losses being incurred. Generally, prevailing uncertainties in inflation, world trade and industrial relations, make a full-time prediction impossible, though a big loss is likely.

In the half-year past, operating revenue rose from £13.38m to £20.99m. Meanwhile, application has been made to the Ministry of Finance for a grant regarding losses in the three months to December 31, 1973, not exceeding £712,000. No credit has been taken for this grant, or any other, for losses in 1974.

On the capital reconstruction scheme (effective on March 27 last), as from March 28 total interest payable on stocks has been about 39 per cent (against 70 per cent) of former contractual rates.



Mr. G. W. Brimyard, joint managing director of Mersey Docks and Harbour Company.

Mr Slater is taking charge at Lubok with cash injection

by Tony May

In an agreed deal announced last night, Mr Jim Slater re-enters the takeover scene. He and his associates are to pay £689,982 in cash for what will be half the equity of Lubok Investments. The Lubok board has agreed to issue 6,271,257 shares subject to the approval of shareholders.

The price is equal to 10.5p—the net asset value of the company at August 31. This has a spread of 8p to 18p in the Official List.

Following completion of the deal, Mr Slater will become chairman of Lubok, the present chairman, Mr J. Rice, will become his deputy, while Mr A. Taylor, head of mining research at James Capel & Co, brokers, will also join the board in a consultative capacity.

When shareholders are asked to vote on the proposals, Mr R. Banks, a director of Slater, Walker Securities, Mr J. Nichols and Mr S. Pegg—executives of Lubok—will not be voting on their own holdings, nor will any investment clients on the Slater-Walker Group.

The aggregate of these interests represents about 16 per cent of the current issued share capital. The Slater Walker Group itself does not have a stake in Lubok.

Since May the policy of Lubok has been to invest mainly in gold mining shares. The additional resources made available by the transaction will be used to provide a base for further expansion, directed mainly towards the same area of investment.

Tiger Oats buy another J. Bibby block

Tiger Oats & National Milling of South Africa, which earlier this year paid £2.7m for Slater Walker's 23.35 per cent stake in the J. Bibby animal feed group, has now acquired a further 15,000 ordinary shares in Bibby. This gives it a total interest of 25.21 per cent.

At the time of the earlier purchase Tiger said that it had no intention of increasing its stake beyond 30 per cent unless someone else were to bid for Bibby. The Bibby directors and family, holding some 30 per cent, is felt unlikely that a third party would succeed unless the approach was agreed both with the company and with Tiger.

Crippling costs slash Fox's Biscuits' profit

Crumbling profits were already indicated for Yorkshire-based Fox's Biscuits at half-time. The full-time decline, as at the interim stage, is blamed on unprecedented cost increases seriously biting into profits before price adjustments could be made effective.

In the industry generally prices of major raw materials increased by between a third and 100 per cent over the past twelve months, with a consequent fall in United Kingdom food manufacturing margins. Price rises have been conceded in recent weeks.

J. Cash says 'no' to approach by Jones Stroud

J. & J. Cash, a public unlisted company best known for its woven and printed labels, has given short shrift to the Jones Stroud (Holdings) offer. The board calls the £1 a share cash bid "wholly inadequate"; in their view it undervalues both the assets and earnings potential.

The directors add that a comprehensive programme of rationalization and development is now well advanced, and they advise shareholders to take no action on the offer.

Jones Stroud last week revealed that they had acquired a 35.3 per cent in the issued share of Cash at 100p a share

Fitch Lovell raises £3.4m from sale of Greig shops

Having acquired David Greig the grocery concern for £6m in cash, Fitch Lovell is busily rationalizing the group and Sir Charles Hardie, the chairman of Fitch, says that about £3.4m is being raised from the disposal of "uneconomic" trading areas of Greig.

On the current year Sir Charles says it would be rash to attempt a forecast. Under free market conditions the group's strength lay in diversification in the food trade, but under government-regulated conditions the outlook for 1974-75 was different. He writes on the danger of

the extinction of profit margins in the grocery side, and his concern for the future of the poultry division because of high feed prices. Sales of wines and spirits to the United States continue to expand and he is confident of further growth.

On the back of a £50m increase in turnover from £217m to £267.6m the group last year managed to push up taxable profits from £6.2m to £6.6m. The results here would have been much higher but for a poor second half in poultry, and from the Hale-Trent cake-baking division which has now been sold to J. Lyons for £1.7m.

Amey Roadstone's net profits cut by £2.5m

Although taxable profits of Amey Roadstone (a member of the Gold Fields Group) are 18 per cent down to £52.2m for 1973-74, the rate of the decline slowed from 28 per cent to £3.79m in the first half to 10 per cent to £4.41m in the second.

However, the board has little expectation of an improvement in business prospects in the near future, although its faith in the longer-term outlook remains unshaken.



Mr. John James, chairman of Amey Roadstone.

The past year was affected by a variety of adverse factors, including price controls, the three-day week, and sharp rises in the cost of bitumen, fuel oil and other supplies. As a result, the margin on trading figure for the year was only slightly up from £18.5m to £18.5m, on turnover 16.5 per cent ahead at £117.7m.

Having already paid an interim dividend of £3.25m, no final is recommended.

Although the bulk of shipping and general haulage operations were able to increase their profits, these were offset by poorer results from the construction and dredging subsidiaries.

Both depreciation and interest charges were higher (depreciation rose from £6.2m to £7.3m and interest from £2.08m to £3.16m). Thus, at the net level, profits were cut to £3.4m against £5.9m.

As the chairman reports the group has an excellent order book, sufficient to keep the available workforce fully employed for a long period ahead. It brings the estimated workload for the current year to a selling value of fully £7.5m which would have been impossible without the additional capacity.

Ford-Werke hopes to stay in profit

Ford-Werke, the West German subsidiary of Ford Motor, hopes to stay in profit this year. The annual meeting in Cologne was held yesterday and the group incurred losses only in the first quarter of this year. At present, with capacity utilization running at 70 per cent—was operating at a profit. Factory stockpiles of new cars had fallen from 31,000 in December last to 5,000. The number of cars in dealers' hands has fallen 6,000 to 30,000.—Reuter.

enter into long-term commitments is endemic in the industry as a whole.

Thos Robinson does well in first leg

When the chairman of Thomas Robinson & Sons, the Lancashire-based engineers and machine makers reported last April on the prospects for the current year things looked fairly gloomy. The group was then just emerging from the setbacks caused by the energy crisis and he underlined the need for the group to get back to full production to cover expenses and make a profit.

The main gains in absolute value were in packaging (58 per cent), trading (42 per cent), construction (34 per cent), rubber and engineering (37 per cent). A geographical breakdown shows that sales rose 41 per cent in France, 63 per cent in Latin America, 60 per cent in Spain, 43 per cent in Italy

As reported in May, Ladbroke, subject to necessary official consents, has agreed to sell its stake for over £1m cash to trustees of the Mark Stein Settlement, which already holds over 10 per cent.

Authorities silent on C & W loss

Two of the parties closely involved in allegations of an extensive cover-up of a £2,500,000 loss in the latest accounts of the government-owned Cable & Wireless group refused to comment on the situation yesterday.

A spokesman for the Treasury, which holds all but three of the 30 million ordinary shares in the company, said it had no comment to make.

In the event, although turnover fell from £2.1m to £1.7m over the period from June 30, taxable profits have emerged not greatly changed at £193,700 against £194,800, although these were boosted by higher interest received of £57,700 against £32,000. The interim dividend is being lifted from 1.25p to 1.49p. The board estimate that the profits for the full year will end about the same as for 1973. These were at a record level of £514,000.

Jump in St-Gobain sales

Although profit figures are not available, initial sales of Saint-Gobain Pont-à-Mousson rose to 10,550m francs (£958m). This is an increase of 30 per cent on the same 1973 period, or a 41 per cent increase in absolute value.

The main gains in absolute value were in packaging (58 per cent), trading (42 per cent), construction (34 per cent), rubber and engineering (37 per cent). A geographical breakdown shows that sales rose 41 per cent in France, 63 per cent in Latin America, 60 per cent in Spain, 43 per cent in Italy

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Chalk works reopen

The chalk quarries and works of Superfine Chalks, Yorkshire, have been reopened following the merger of Greeff-Chemical Holdings and Chemical Securities. Superfine will operate as a division and production has already restarted. It is also intended to install new equipment to increase the present capacity, as there are several million tons of high quality chalk reserves available.

Park Yorks move on restoration

Park Yorkshire hope to arrange a deal fairly soon as a prelude to seeking a re-quotations of the shares, says the chairman in his annual statement.

Fifteen months ago the company, having sold off most of its traditional interests in engineering, etc., asked for its shares to be suspended as negotiations were at an advanced stage for a major acquisition of a private company. At the annual meeting last October the company was said to be in the final stages of negotiations for the injection which would be on a share-exchange basis.

DTI aid for Gen Engineering

With financial assistance of the DTI General Engineering (Radcliffe) has bought the plant and factory owned by T. Dryden & Sons of Preston. This will enable the group to produce the additional productive capacity so badly needed.

As reported in May, Ladbroke, subject to necessary official consents, has agreed to sell its stake for over £1m cash to trustees of the Mark Stein Settlement, which already holds over 10 per cent.

Hume Inds (Far East)

On turnover up from \$51.4m to \$57.1m preliminary pre-tax profits of Home Industries (Far East) are ahead from \$8.04m to \$12.8m. After allowing for \$1.26m (against \$584,000) applicable to outside shareholders, and extraordinary items of \$83,000 (nil), net profits amounted to \$5.7m (\$3.8m). Two interim dividends of 5 per cent had been declared.

Woodend-Insulind

Offer for Insulind has been accepted on 75,308 shares giving a total stake of 41.25 per cent of equity (341,000) shares. Bid extended until September 23.

CJB joins Iranian venture

Constructors John Brown, the multi-national, construction offshoot of John Brown & Co, and the Mohandessi Iran Company IECC, one of Iran's leading mechanical and civil construction companies, have signed an agreement in Teheran to form a new Iranian company.

It aims to take a major role in Iran's expanding industrialization programme, particularly in the fields of gas and petrochemicals. No financial details are disclosed.

The proposed name of the new company is CJB Mohandessi Iran, with headquarters in Teheran. The chairman will be Mr Mahmoud Poozesh, who is well known in the national oil industry and is the chairman of Mohandessi Iran. Mr G. V. C. Davies, a leading figure in international contracting, will be managing director.

Constructors John Brown has been active in the past in Iran, and was responsible inter alia for the engineering and construction of the National Iranian Oil Company's first pipeline from Ahwaz to Azna.

Business appointments

Mr E. W. Phillips, a managing director of Lazard Bros, has been made a director of Higgs and Hill. Mr Phillips will become deputy chairman and chairman-designate of Higgs and Hill as from October 1. The present deputy chairman, Mr C. D. Hill, is resigning but remains a non-executive director. Mr Phillips will succeed Mr A. F. Parker as chairman after the annual meeting in June, 1975. Mr Parker will remain on the board in a non-executive capacity.

Mr John Cuckney has been appointed a senior Crown Agent and chairman of the board of Crown Agents in succession to Sir Claude Hayes.

Mr J. E. Strindan is joining the main board of Bover Engineering.

Mr M. R. Bates is taking over as chairman of Gray Electronics.

Chairman-designate at Higgs and Hill

Mr R. Jolliffe and Mr D. Gadd have been appointed directors of Concentric.

Mr A. W. G. Lord has been appointed a director and chief executive of Baring Sanson Multi-national.

Mr R. M. Brams has been appointed managing director of Procter & Gamble.

Mr A. V. Parker has been appointed sales director of Imperial Metal Industries.

Mr Peter Holland has been appointed managing director of Baric Computing Services.

Mr Ian Matthews has been made a director of Miller Buckley Industries.

Mr R. P. Cooper succeeds Sir Frank Cooper as chairman of Ashmore Investment Trust. Mrs J. M. Fabury joins the board.

Mr S. Haxson is made a director of Leckson.

Briefly

Crouch Group Limited

Main points from the circulated Statement by the Chairman, Mr. R. E. Aris, F.C.A.

- Trading profit before exceptional item showed an increase on that for 1972/73, which year included a claim of approximately £200,000.
- The proceeds from the sale of land, the cost of which is written down, will materially reduce interest charges in the year 1974/75.
- Only 7 houses unsold two months or more after building completion.
- Increased availability of mortgages has improved current trading and sales.
- All subsidiary companies are trading at a profit.
- Sound financial position with surplus of assets over liabilities equivalent to approximately 90p per share.
- Total gross dividend 15%. Earnings per share 5.75p.

BUILDERS - CONTRACTORS - ALLIED TRADES

Copies of the report and accounts may be obtained from the Registrars, Samuel Montagu & Co. Limited, St. Olaf House, Tooley Street, London, SE1 2PL.

Handwritten signature or mark at the bottom of the page.

FINANCIAL NEWS AND MARKET REPORTS

Stock markets

Stronger performance from gilts

The gilt edged market turned higher yesterday following weekend reports from the United States that the Federal Reserve authorities may relax monetary policies to fight recessionary trends. But a cautious rally in equities was wiped out in late dealings by the disclosure of a substantial loss on foreign exchange dealings at a continental office of Lloyds Bank International. Banking shares fell heavily at the end of the session, with Lloyds Bank finally 18p off at 127p.

Prices were fully held at the close. Dealers described the buying pressure as "fairly good". At the longer end, gains ranged to around 1/4 of a point, but turnover was thin. Here also, the best prices were held at the close, with the market little affected by the Lloyds announcement. The new account in the equity market showed every sign of making a cautious start, and share prices were little changed from overnight levels at the end of the first hour. But as news of the improvement in gilts filtered through prices began to turn higher.

Further cash problems in the financial sector. These fears drove market indices to 15-year lows only a week ago. Shares in Lloyds Bank fell to 127p, rallied to 136p, but then fell back again in nervous trading to close a net 18p off at 127p. Barclays Bank lost 15p, Midland Bank (170p) shed 10p and National Westminster Bank (142p) were finally 13p off.

Commodities

Tin hits peak of £4,140

Standard tin (cash) closed £2.50 higher yesterday at £4,140. Standard (three months) was £35 down and high-grade (also three months) was £40 lower. Yesterday morning, standard tin (cash) was traded at £4,140 a tonne on the LME. This peak was a direct result of the technical shortage in nearby supplies of metal which has dominated the market recently and which became particularly acute last week.

Commodities

New wool contract

Terminal trading started yesterday morning in a revised London wool contract, which superceded the one launched with little success in Sept. 1971. The market opened on a steady note in initial dealings of eight lots. Quoted markets are in Dec, March, May, July, Oct, Dec and March, with a contract unit of 1,500 kilos of clean wool content.

Commodities

Discount market very quiet

Most discount houses found the flow of fresh money yesterday just about adequate in very quiet conditions. But one or two houses met some difficulties and sought relief from the Bank of England. The authorities helped out by purchasing a small amount of Treasury bill directly from the houses that needed assistance.

Commodities

Trading begins in open outcry rubber

Open outcry trading in rubber began yesterday morning with a well-attended but somewhat cautious opening call which lasted about 25 minutes. The switch-over to call (or futures) trading came some 52 years after the formation of the Rubber Settlement House, when most of the terminal's business was done on a private treaty basis through brokers on the Commodity Exchange floor.

Eurobond prices (midday indicators)

Table with columns for S STRAIGHTS, S CONVERTIBLES, and NON-S BONDS. Lists various Eurobond issues with their respective prices and yields.

Latest dividends

Table listing dividends for various companies including Fox's Biscuits, House of Fraser, and others, with columns for dividend amount and dates.

Foreign Exchange

The dollar strengthened yesterday against most currencies in European foreign exchange markets in subdued trading because of the Labour Day Holiday in the United States.

UK metal stocks

Stocks in London Metal Exchange official warehouses at the end of last week (all tonnes unless otherwise stated) were as follows: Copper rose by 8.25 to £3.67; tin rose to 1,430; lead fell 825 to 14,825; zinc rose 200 to 18,450; silver rose 180,000 to 11,570,000 Troy ounces.

Walthamstow Stadium

Though the balance-sheet shows that the prolonged stock market slide has taken its toll of quoted investments, down from £2.2m to £994,000, Walthamstow Stadium (one-third owned by GRA Property), regards future prospects as "most encouraging".

UK earnings acquired by Empire of India

In a move to alleviate the problem of paying dividends out of overseas operations by acquiring United Kingdom earnings, Empire of India Holdings has agreed to purchase from Eastern Produce 400,000 shares in LK Industrial Investments at 20p each, giving a total stake of 20.6 per cent, and also 668,000 shares at 8p in Single Holdings, for a stake of 16.6 per cent.

£14m finance for Dubai cement plant

The Export Credits Guarantee Department is to guarantee a £14m loan which Lloyds Bank has made available to the ruler of Dubai for use in the construction of a new cement plant. The contract, worth £26m, has been awarded to Costain Civil Engineering. The plant, which will be the largest in the Gulf, will come into commission early in 1978. It will have an output of 500,000 tons a year.

Anglo-Indonesian Plantations

Chairman says group has ample cash with which to invest in industrial projects both inside and outside Indonesia.

Brown Brothers

Brown Brothers & Albany name has been changed to Brown Brothers Corp.

Etiole Selection

Hoare & Co. Govett, acting on behalf of investment clients has sold 31,630 shares (36.6 per cent) of Etiole Selection, French registered unit trust for 3,84m francs to Banque de l'Union Maritime at 10 francs.

Bank Base Rates advertisement listing interest rates for various banks and services.

Foreign Exchange advertisement highlighting the dollar's strength and its impact on the market.

Walthamstow Stadium advertisement detailing the stadium's financial performance and future prospects.

UK metal stocks advertisement providing a detailed breakdown of metal prices and market trends.

UK earnings acquired by Empire of India advertisement discussing the acquisition of UK earnings by the company.

£14m finance for Dubai cement plant advertisement detailing the financing and construction of a new cement plant.

Anglo-Indonesian Plantations advertisement highlighting the company's investment opportunities.

Brown Brothers advertisement announcing the name change to Brown Brothers Corp.

Etiole Selection advertisement providing information about the unit trust and its management.

PHOTOPIA INTERNATIONAL LIMITED advertisement featuring financial results, company information, and product listings.

SUN ALLIANCE & LONDON INSURANCE GROUP advertisement featuring a cartoon character, promotional text, and contact information.

SAVILLS
INDUSTRIAL PROPERTY
 20 Grosvenor Hill - Berkeley Sq - London W1X 0HQ
 Telephone 01-499 8644 - Telex 263796

London and Regional Market Prices
Bank shares weak

ACCOUNT DAYS: Dealings Began, Sept 2. Dealings End, Sept 13. Contango Day, Sept 16. Settlement Day, Sept 24.
 † Forward bargains are permitted on two previous days.

SAVILLS
PROPERTY INVESTMENT
 20 Grosvenor Hill - Berkeley Sq - London W1X 0HQ
 Telephone 01-499 8644 - Telex 263796

1974 High Low Company Price Chgs % P.E.				1973 High Low Company Price Chgs % P.E.				1972 High Low Company Price Chgs % P.E.				1971 High Low Company Price Chgs % P.E.			
BRITISH FUNDS															
100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
COMMERCIAL AND INDUSTRIAL															
A - B															
100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
COMMONWEALTH AND FOREIGN															
LOCAL AUTHORITIES															
FOREIGN STOCKS															
DOLLAR STOCKS															
BANKS AND DISCOUNTS															
BREWERS AND DISTILLERS															
INSURANCE															
INVESTMENT TRUSTS															
OIL															
PROPERTY															
RUBBER															
TEA															
FINANCIAL TRUSTS															
SHIPPING															
MINES															
MISCELLANEOUS															
REGIONALS															

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Authorized Units, Insurance & Offshore Funds

Table with multiple columns listing various financial products, their providers, and details. Includes sections for 'Authorized Unit Trusts', 'Insurance Bonds and Funds', and 'Offshore and International Funds'.

Appointments Vacant also on page 10

GENERAL VACANCIES

DIOCESE OF CHESTER

DIOCESAN SECRETARY

This key position will become vacant early in 1975. Applications are invited from suitably qualified candidates with administrative, accounting, secretarial and public relations experience. Candidates should also have an active interest in church affairs.

Starting salary, based on qualifications, £3,250 to £3,500. Non-contributory pension scheme and L.V.A.

Application forms from the Diocesan Secretary, 12 Abbey Square, Chester, CH1 2JE. Replies by 30th September, 1974.

A FUTURE IN NORTH SEA OIL

£1,700-£3,500

Our clients, a major Petro-chemical Group pioneering in North Sea Oil, has several career opportunities on the financial side for young men with a good educational background and some commercial experience.

In addition, there are two more senior vacancies requiring 1. a good grasp of basic accounts and 2. experience as a Sales Representative. Excellent conditions of employment and potential appreciated.

Please ring 01-229 3221, write Beresford Associates, 118 Kensington Church Street, W.8.

KING'S HEALTH DISTRICT (TECHNICIAN)

There are vacancies for full time part-time ASSISTANT RADIOLOGICAL TECHNICIAN in the District. These posts will provide excellent opportunities for suitably qualified applicants in a wide range of hospital units.

RESEARCH ASSISTANT

For the Topper Company, 90 Gloucester Pl., W.1. CASHIER (aged 22-30) with some knowledge in our product control. Knowledge of our product control duties will be an advantage.

SENIOR BOOKING CLERK

REQUIRED FOR BUSINESS HOUSE RECEIVING DEPARTMENT AND TRAVEL AGENCY. Must have minimum 2 years experience in IATA tickets.

CAREER SUCCESS!

DEPENDS upon using your talents in work which satisfies you. Guidance and advice have helped many thousands choose their careers.

A GOOD MOVE

For alert, young O.A. level candidates (17-21), a free program in planning and training is available. Good training scheme available in pleasant location.

MANAGEMENT TRAINING

With good O.A. levels (19/24) and a minimum of 2 years experience in a managerial position, you are invited to apply for a 6-month management training course.

ASSISTANT ACCOUNTANT

A fast growing London-based company is seeking an Assistant Accountant. The successful candidate will be responsible for the day-to-day running of the accounts department.

LEGAL APPOINTMENTS

ALANGLATE LEGAL STAFF NEWLY qualified solicitors with 2-5 years experience in London and the U.K. enabling them to offer a wide range of services to all solicitors and other legal professionals.

ACCOUNTS CLERK, Maths or Economic

Accountant, Maths or Economic. Duties include: preparing and checking accounts, maintaining the accounts system, and assisting the accountant in all matters relating to the accounts.

BOOKKEEPER. They are real promotion prospects with this international company.

PROFICIENT YOUNG MANAGER FOR French Cafe Restaurant

French Cafe Restaurant. Proficient young manager for French Cafe Restaurant. The successful candidate will be responsible for the day-to-day running of the restaurant, including staff management and customer service.

WORKING HOLIDAY on North Devon coast

Working Holiday on North Devon coast. A unique opportunity for young people to work and travel in the beautiful coastal town of Bude, Devon.

ACCOUNTANCY UNIVERSITY APPOINTMENTS

The University of Manchester INSTITUTE OF SCIENCE AND TECHNOLOGY

Applications are invited for the following vacancies in the Bursar's Department. (1) ACCOUNTANT (Ref. B/139/S) The successful candidate will be immediately responsible to the Deputy Bursar (Finance) for maintaining all income and expenditure records...

(2) INTERNAL AUDITOR (Ref. B/140/S) Applications are invited from qualified accountants for this appointment. The duties will include the examination and monitoring of the accounts and records of the various departments...

(3) SYSTEMS ANALYST/PROGRAMMER (Ref. B/141/S) The successful candidate for this post will be responsible for the design and development of computer programs for the Institute of Science and Technology.

(4) SENIOR ADMINISTRATIVE ASSISTANT (Ref. B/142/S) Applications are also invited for the above post in the Bursar's Department from those possessing a recognized accountancy qualification...

MACQUARIE UNIVERSITY SYDNEY, AUSTRALIA SENIOR LECTURER/LECTURER IN LAW IN SCHOOL OF LAW

Applications are invited for appointment as SENIOR LECTURER or LECTURER in the School of Law. The successful applicant will be required to take part in the planning and teaching of the law courses...

PUBLIC AND EDUCATIONAL APPOINTMENTS COUNTY OF NORTH YORKSHIRE

ASKHAM BRYAN COLLEGE OF AGRICULTURE AND HORTICULTURE Askham Bryan, York, YO2 3PR HEAD OF FARM MANAGEMENT DEPARTMENT AND FARM MANAGEMENT SURVEY UNIT

Applications are invited for this NEW appointment as a result of the College shortly taking over responsibility for the collection and analysis of Farm Management data in Yorkshire.

This senior appointment in the College will be responsible for establishing a new Department dealing with all Farm Management work of the College.

Salary will be on the scale £3,672 x 5 increments to £4,068. (Plus threshold payment.) Further information and application forms are now available from The Principal, to whom they should be returned within TWO weeks.

Royal Institute of Chemistry ADMINISTRATIVE ASSISTANT

Post 34 to 34. Is required for the Royal Institute of Chemistry. The duties are related to the administration, organization and examination of students...

University of Essex REGISTRAR

Applications are invited for the post of Registrar at a salary of £2,978. Further particulars may be obtained from the Vice-Chancellor, to whom four copies of an application form should be submitted...

University of West Indies, Jamaica LEARNING ASSISTANT

Applications are invited for the post of LEARNING ASSISTANT in the School of Education, Jamaica. The successful candidate will be responsible for the day-to-day running of the school...

PROJECT ASSISTANT MONEY WHICH?

Money Which? is a quarterly consumer supplement which deals with money, and sets out to provide the layman with comprehensive, understandable information on investment, insurance, loans, taxation and other financial matters.

This job involves giving secretarial and clerical help to the Editor and other members of the Money Which? team. This includes dealing with day to day correspondence, typing reports and liaising with consultants and checkers.

University of Aberdeen LECTURESIPS IN ANATOMY

Applications are invited for two posts of Lectureships in Anatomy. The successful candidates will be responsible for the teaching of anatomy to medical students in the University of Aberdeen.

University of Birmingham DENTAL SCHOOL CHAIR OF DENTAL PROSTHETICS

Applications are invited for the Chair of Dental Prosthetics in the Dental School, University of Birmingham. The successful candidate will be responsible for the teaching of dental prosthetics to students.

FAMILY CHAUFFEUR c. £46 per week

One of our Managing Directors requires a Chauffeur for himself and family who must be aged 25+, have Rolls-Royce experience and a clean driving licence.

AREA DISTRIBUTION MANAGER

Bass North West Limited, a member of the Bass Chartered Group, offers an outstanding opportunity to a dynamic Manager to take full responsibility for one of our major Distribution Depots in the North West.

MANAGEMENT AND EXECUTIVE

EXECUTIVES over 40 are invited to send for a new career prospecting service. The service is designed to help you find a new career opportunity that matches your skills and interests.

ACCOUNTANCY

ARTICLED CLERKS to start their training in the accountancy profession. The successful candidate will be responsible for assisting the articled clerk in all matters relating to the accounts.

